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L. A. Weber

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Thermodynamic and Related Properties of Oxygen from the Triple Point to 300 K at Pressures to 1000 Bar

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Prepared for NASA Lewis Research Center

National Aeronautics
and Space Administration

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THERMODYNAMIC AND RELATED PROPERTIES OF OXYGEN FROM THE TRIPLE POINT TO 300 K AT PRESSURES TO 1000 BAR

L. A. Weber

NBS compressibility measurements and thermodynamic properties calculations for oxygen have been extended to higher pressures. The results of a new experimental program are presented in the form of PVT data in the temperature range 58 - 300 K at pressures up to 800 bar. Tables of the derived thermodynamic properties on isobars to 1000 bar are given, including density, internal energy, enthalpy, entropy, specific heats at constant volume and constant pressure, velocity of sound, and the surface derivatives $(\partial P/\partial T)_\rho$ and $(\partial P/\partial \rho)_T$. Auxiliary tables in engineering units are also given. The accuracy of the data is discussed and comparisons are made with previous data.

Key words: Density; enthalpy; entropy; oxygen; properties of fluids; specific heat; velocity of sound.

1. Introduction

Approximately eight years ago this laboratory began publishing a series of papers on experimental measurements of the properties of oxygen in the range from the triple point (approximately 54 K) to 300 K at pressures up to about 340 bar. Included in this series were measurements of PVT data and derived thermodynamic properties [1], specific heats [2,3], velocity of sound [4], dielectric constant [5], viscosity [6], vapor pressure [7] and critical region behavior [8]. Recent developments in the design of spacecraft engines, however, have resulted in the need for thermophysical properties data at higher pressures. In an earlier, interim report [9], we extrapolated the above results to 690 bar. In this report we present new PVT measurements to 800 bar and the thermodynamic properties derived from them. Approximately 348 PVT data points were measured at 38 densities ranging from 15 to 41 mol/ℓ (0.48 - 1.3 g/cm^3).

The data have been represented analytically for the purpose of interpolation and to allow calculation of the thermal properties. The tables of derived

*This work was carried out at the National Bureau of Standards under the sponsorship of the National Aeronautics and Space Administration.

properties have been extrapolated to 1000 bar. The results have been compared with published data in this temperature and pressure range.

2. Experimental Method

2.1 Description of the Apparatus

The apparatus, which was designed to make PVT measurements on isochores (lines of constant density) was originally described by Goodwin [10]. Later modifications were described by Weber [1] and by Prydz and Straty [11]. Only a brief description will be given here. The sample holder is a heavy-walled copper cylinder of approximately 5 cm O.D. and 1.6 cm I.D. The volume of the cavity is 27.25 cm^3. Corrections are made for the change in volume with temperature and pressure. The sample is introduced, and the pressure is measured, via a stainless steel capillary having an I.D. of about 0.033 cm. Temperature is measured with a platinum resistance thermometer mounted in a well in one end. The sample holder is mounted in a nearly adiabatic cryostat, and the small amount of residual cooling is balanced by means of a temperature controller and a heater wire wrapped around the outside of the container. Pressure is measured with an oil-operated dead weight gage described in detail in [1]. Corrections were made for the hydrostatic pressure head in the capillary tubing. Density was determined by releasing the sample into a 22 ℓ calibrated glass bulb maintained at room temperature in a thermostated water bath. Pressure in the glass bulb was measured with a quartz spiral bourdon gage.

Samples came from commercially available cylinders of ultra high purity oxygen which was passed through a molecular sieve trap at 76 K at cylinder pressure to remove any water. The statement of purity from the supplier is as follows: argon 3 ppm, nitrogen 20 ppm, krypton 16 ppm, total hydrocarbons 17 ppm.

2.2 Experimental Procedure

The sample was passed through the molecular sieve trap and loaded into the sample holder at a predetermined temperature and pressure, calculated to yield the desired experimental density. The sample holder was sealed off by means of a stainless steel valve mounted on top of the cryostat. The measurement system then consisted of the sample holder, a length of capillary tubing with a volume

of 0.068 cm^3, the valve, volume of 0.024 cm^3, and a differential pressure transducer with a volume of 0.30 cm^3. Pressure was then measured as a function of temperature at a set of integral temperatures along a path of nearly constant density. When the maximum temperature or pressure was reached, the sample was released into the glass bulb. Measurement of the gas pressure in the bulb along with available room temperature virial coefficients allowed calculation of the amount of sample, and thus the density.

3. Experimental Results

3.1 The Data

The data consist of 348 points taken along 38 lines of (approximately) constant density (experimental isochores). Data on each isochore were taken on the same set of temperatures so that the result would be a set of experimental isotherms. A two degree spacing was used up to a temperature of 160 K, then a five degree interval up to 200 K, and a ten degree interval to 300 K. All temperatures were measured on the IPTS 1968 scale. For each experimental density one or more points were measured at pressures less than 340 bar, within the range of the data in reference [1] to check the consistency of the two data sets. The results of this check are discussed in section 3.3.

The data are given in table I, and their location with respect to the earlier data is shown in figures 1 and 2.

3.2 Representation of the Data

The present data were combined with those from [1] to define the PVT surface used for the calculation of the thermodynamic properties. The earlier data were measured on the IPTS 1948 temperature scale and, below 90 K, on the NBS 1955 scale, and it was therefore necessary to convert them to the IPTS 1968 scale for the present work. This was accomplished by modifying the experimental pressures using the relationship,

$$\Delta P = \left(\frac{\partial P}{\partial T}\right)_{\rho} (T_{68} - T_i) \qquad (1)$$

where T_i was the temperature on either of the previously used scales. In this

way the tabulated values of the temperature were not changed, and all the data could be fit to the same set of isotherms. The temperature conversion tables were taken from [12].

For the purpose of representation the PVT surface was divided into three regions, and each region was smoothed and interpolated by the means which seemed most appropriate. Location of the three regions is shown in figure 3, and they are discussed separately below. Each data point was given a weight compatible with the estimated uncertainties in the experimental variables.

Low Density Region. A virial-type expansion in density insures proper behavior of the entropy calculations at very low density and so was used here. A truncated virial expression with two coefficients,

$$P = RT\rho\ (1 + B\rho + C\rho^2) \tag{2}$$

represented the data very well up to a density one half the critical value. The virial coefficients, B and C, were expressed as low-order polynomials in temperature, and equation (2) was fit to the data in the form of an analytic surface. In addition to the PVT data, 14 experimental values of C_v at a density of 6.1 mol/ℓ were included in the fitting process. None of the new data fall within the range of equation (2) and so in the present work the data of [1] were merely refit on the IPTS 1968 temperature scale. The functions and parameter values used for B and C are given in Appendix A.

Intermediate Densities. The data between 128 K and 300 K at densities greater than 6.5 mol/ℓ up to the maximum experimental pressure were represented by 35 isotherm polynomials of the form

$$P = RT\rho + \sum_{J=1}^{N} A_J \rho^{(J+1)}. \tag{3}$$

The number of coefficients used varied from four to a maximum of 14 for the 156 K isotherm. These isotherms were used to smooth the data and to interpolate it to even increments of density. The pressure-temperature pairs so obtained for a given density were then fit with an isochore polynomial of the form,

$$P = \sum_{J=1}^{5} A_J T^{(3-2J)} \quad . \tag{4}$$

A total of 62 isochore polynomials were used to cover the density range from 6.5 to 37.0 mol/ℓ, using a 0.5 mol/ℓ increment in density. The intermediate densities then were represented by a grid of isotherm and isochore polynomials. The parameters used in equations (3) and (4) are given in tables II and III, respectively.

At subcritical temperatures the isotherms were constrained to agree with the liquid-vapor two phase boundary given in Appendix B. The isochores were also constrained to this boundary. For densities greater than 28.5 mol/ℓ isochores were constrained to have their second derivatives, $(\partial^2 P/\partial T^2)_\rho$, agree at 128 K with the values given by the high density surface in the next section. This was done to minimize discontinuities in the derived properties at this boundary in the surface representation.

High Densities. The high density region, bounded in figure 3 by the melting curve, vapor pressure curve, and the 128 K isotherm, was represented with a fourteen parameter empirical function of the form,

$$\begin{aligned} P = {} & RT\rho + (A_1 T^2 + A_2 T + A_3 + A_4/T) + (A_5 T^2 + A_6 T + A_7 + A_8/T \\ & + A_9/T^2)\rho + (A_{10} T^2 + A_{11} T + A_{12})\rho^2 + (A_{13} T^2 + A_{14} T)\rho^3 \quad . \end{aligned} \tag{5}$$

The values of the parameters are given in table IV. In addition to the PVT data, some of the specific heat data from [3] were included in the fit. These were used to influence the derivatives of the surface and ensure more accurate calculation of the derived thermodynamic properties.

Other Data. The melting pressures and liquid-vapor two phase boundary, were taken from [1], and the critical parameters were taken from [8]. The data were converted to the IPTS 1968 temperature scale and the curves were refit. The vapor pressure curve from [7], refit on the IPTS 1968 scale, was also used. The functions are repeated here in Appendix B with the new coefficients for the convenience of the reader.

Interpolation Methods for Densities. Equations (2-5) are all explicit in pressure. Therefore the density at a given temperature and pressure was found by iteration. In the high and low density regions a simple Newton's iteration was used along the appropriate isotherm of the analytic surfaces, equations (2) or (5). In the intermediate density region, densities were found by iterating on the isotherms tabulated in table II. For a temperature falling between two tabulated isotherms a linear interpolation between the two bracketing isotherms would be adequate.

Saturation densities at temperatures greater than 128 K in the liquid, or greater than 150 K for the vapor, were calculated from the functions given in Appendix B(e). The appropriate isotherm and isochore polynominals were constrained to this boundary in order to insure consistency between the two-phase boundary and the one-phase surface. At lower temperatures this consistency is assured by allowing the saturation densities to be determined from the intersection of the PVT surfaces, equations (2) and (5), with the vapor pressure curve. These surfaces were constrained to agree with the equations in Appendix B(e) at 150 K and 128 K respectively in order to eliminate discontinuities at these points.

3.3 Estimates of Uncertainty of the PVT Data

In references [1,10,11] and several other publications of this laboratory considerable attention has been given to the determination of the volume of the sample holder, which is of primary importance in the measurement of the density. The results of several workers over a period of years indicates that we can determine this volume with an accuracy of about 0.1%. The uncertainty in the external volumes connected to the sample holder is estimated to be 0.01 cm^3. The effect on the density of this uncertainty varies from 0.036% for the room temperature gas data to a negligible amount for low pressure liquid data. Corrections made to the sample holder volume for pressure and temperature effects are estimated to add several hundredths of one percent at the highest pressure and lowest temperatures. The volume of the 22 ℓ glass bulb is known to within 0.04%. The accuracy of the dead weight pressure gage is 0.01 - 0.02%, and errors due to this source are negligible in the range of the present data. Temperature measurements had precision and reproducibility within 0.001 K. However, the overall accuracy of the potentiometer used leads to uncertainties in the absolute

temperatures which vary from 0.002 K at 50 K to 0.028 K at room temperature. From the above considerations the overall maximum uncertainty varies from about 0.1% for the low temperature, low pressure liquid data to about 0.17% for the high pressure, room temperature gas data. The experimental precision is about 0.02% in density.

For the purpose of this report it was considered most important that the new data show no appreciable systematic deviations from the data of [1]. For this reason, on almost every experimental isochore, one or more points were measured at pressures within the range of the data of [1] and comparisons were made with the earlier PVT surface representation. In this way the compatibility of the two data sets was monitored during the course of the measurements.

In recent PVT measurements on parahydrogen [13] the sample holder had been subjected to pressures as high as 850 bar. The volume was observed to have expanded inelastically by about 5%. In the present work, the above compatibility measurements indicated that the volume underwent further "slippage" by small amounts on three occasions. Each change could be correlated closely with some of the highest pressures attained during the work. The only reasonable conclusion is that the elastic limit of the sample holder occurs at a pressure of about 800 bar. The first 16 experimental runs correlate well with the data of [1] using the initial volume calibration. The next four runs show an average systematic deviation from the earlier data of 0.16%. After run 20 the deviation averaged 0.22%, and after run 29 the deviation increased to about 0.72%. The volume of the sample holder was adjusted by the above amounts, and the corresponding density adjustments have been incorporated into the data given in table I.

The above uncertainties apply to the experimental data. The PVT surface representations, discussed earlier in this section, have been incorporated into a computer program used to interpolate density and to calculate the derived thermodynamic properties. The last column in table I, expressed as percent difference in density, indicates how well this program reproduces the experimental data.

3.4 Comparisons With Other Data

The present data have been compared with the oxygen PVT surface given in [1]. The 56 points at pressures less than 350 bar exhibited an average deviation of

+ 0.04% in density from our earlier surface.

Comparisons with earlier published data at pressures less than 330 bar have been given in [1] and are not repeated here. Streett and Sagan [14] have published more recent densities on six isotherms between 96 and 250 K at pressures to 684 atm. They calibrated the volume of their apparatus by comparing their results with ours from [1] at low pressures at 100 K. Thus the results of the two laboratories should be compatible. The differences between their experimental results and the values interpolated from our PVT surface are shown in figure 4. The agreement between the compressed liquid data, 96 - 110 K, is seen to be good, with perhaps a slight systematic trend with pressure. The compressed fluid data between 170 K and 250 K agree less well. These differences may be due, as they stated, to the thermal expansion correction applied to the volume of their sample holder. Their container is made of maraging steel, for which the thermal expansion is only approximately known at low temperatures. Since the data sets were forced to agree at 100 K, the largest disagreement would be expected at the highest temperature. In addition, our own data has a larger uncertainty at the higher temperatures due to the larger effect of the corrections for the external volumes.

The vapor pressure equation used here is a refit of Goodwin's equation [7] on the IPTS-68 scale. It has been extensively compared with the most recent data and with other equations by Wagner, et al. [15]. The agreement is quite good for temperatures above 85 K. However, equations fit to the older data (pre 1968) exhibit deviations from the latest data which approach a maximum of 0.15% at 70 K. The newest data were measured with thermometers calibrated on the IPTS-1968 temperature scale while the older data were converted to this scale by means of published conversion tables. The systematic chronological difference may suggest that there is a small incompatibility between these two methods of arriving at IPTS 1968 temperatures. Prydz's fit of Goodwin's equation used a value of 148 N/m^2 for the triple point pressure, while the present version uses an average of the best recent experimental determinations, 146.4 N/m^2. The triple point temperature used here, 54.359 $\pm$ .002 K, is that measured with our thermometer. It agrees with the accepted IPTS 1968 value of 54.361 K within its uncertainty.

3.5 Thermodynamic Properties

Many equilibrium thermodynamic properties can be derived from the PVT surface by means of well-known relationships. These relationships and the calculation techniques used here have been given in [1], and they will not be repeated. Knowledge of the PVT surface allows the calculation of the isothermal change in a property with density, and to this must be added the value of that property in the ideal gas state at the corresponding temperature. The thermodynamic properties of the ideal gas are taken from Woolley [16] and the equations used here are given in Appendix B. In addition, changes in properties with temperature may be calculated via specific heat data, and use is made of the specific heat data from [2,3] on a particular density, 28.687 mol/ℓ, to allow calculations in the compressed liquid without the necessity of crossing the vapor-liquid boundary. The results are tabulated for the liquid-vapor coexistence boundary in table Va and along isobars from 1-1000 bar in table VIa. The same properties are also tabulated in engineering units in tables Vb and VIb, respectively. Properties tabulated include specific volume, internal energy, enthalpy, entropy, specific heats at constant volume and at constant pressure, sound velocity, and the surface derivatives $(\partial P/\partial \rho)_T$ and $(\partial P/\partial T)_\rho$.

The derived properties were compared in [1] with existing, published experimental measurements. Comparisons here are confined to those with more recent experimental results, measurements at pressures greater than 350 bar, and regions where our surface representation has been modified substantially. Goodwin and Weber [3] measured single phase C_v data at 19 densities between 0.45 and 3 times critical density. After deleting one, apparently incorrect, C_v isochore and several points near critical, the remaining 131 data points were compared with values calculated from the PVT surface. The average of the absolute values of the relative deviations was 0.89%. Goodwin and Weber also estimated the maximum uncertainty for each experimental point. If we divide the difference, |calculated minus experimental C_v|, by this estimated experimental uncertainty and average over all the data, the average is 1.05. Thus the C_v data are reproduced to within their experimental uncertainty. For the data close to the critical point the differences increase to over 20%. This is not surprising since the present representation corresponds to an analytic surface which cannot lead to accurate specific heats in the near vicinity of the critical point.

Calculation of the entropy of the saturated liquid at the triple point begins with the entropy of the ideal gas at 160 K, from [15], and follows a rather complicated path, detailed in [1]. The value arrived at is 67.11 J/mol-K. This value may be compared with the one from Giauque and Johnston [17], 67.10 $\pm$ 0.15 J/mol-K, found by integrating their specific heat data for solid oxygen and using their value for the heat of fusion at the triple point. This comparison may be used to indicate the agreement between these two experiments and the third law of thermodynamics. It also serves as an independent check on the reliability of the derived properties of the saturated liquid. Uncertainties in the enthalpy and internal energy of the saturated liquid may also be estimated by comparing the three different ways of calculating the heat of vaporization with the available experimental measurements. This is done in table VII. Here the ΔH is the vapor enthalpy less the liquid enthalpy as given in table Va. The agreement with the quantities $T\Delta S$ and the value of ΔH calculated via the Clapeyron equation indicates that there are no appreciable errors in the vapor pressure curve. From the above comparisons the uncertainty in the enthalpy of the saturated liquid is estimated to be no more than 10 J/mol. A careful consideration of the effects of the PVT surface indicates that this uncertainty increases to 15 J/mol at a pressure of 800 bar. In the supercritical gas phase the enthalpy calculations begin at zero pressure with the ideal gas value, which has negligible uncertainty. At 300 K the uncertainty increases to 6 J/mol at a pressure of 200 bar, 10 J/mol at 400 bar, and 16 J/mol at 800 bar. These statements of accuracy would also apply to the internal energy. Uncertainties in all quantities are greater in the critical region.

Calculated values of the velocity of sound have been compared with the experimental results of Van Itterbeek and Van Dael [18] and with Straty and Younglove [4]. These comparisons are shown in figures 5 and 6. It is seen that the agreement is generally good at supercritical temperatures, but there is a systematic trend which leads to differences up to about 1% at 350 bar, the maximum experimental pressures. This trend is also evident in the liquid where the agreement is less good, eventually reaching 3.8% at 68 K and a pressure of 900 bar. The velocity of sound, W, is calculated via the relationship,

$$W = \left[\left(\frac{\partial P}{\partial \rho}\right)_T + \frac{T}{\rho^2 C_v}\left(\frac{\partial P}{\partial T}\right)_\rho^2\right]^{1/2}, \qquad (6)$$

from which it is seen that this comparison constitutes a fairly severe test of the surface derivatives. This is especially true in the highly incompressible liquid phase where small changes in the volume of a system result in relatively large pressure changes. Thus small systematic errors in the volumes of the PVT system could lead to systematic errors in the surface derivatives used in (6). Additional errors are undoubtedly introduced by the necessary analytical representation used for ths surface.

4. Summary

Experimental PVT measurements have been made at pressures up to about 800 bar. The data were represented analytically, and the resulting PVT surface was used to derive thermodynamic properties. The uncertainties in the experimental and derived properties were analyzed, and the results were compared with other published data for oxygen.

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Bibliography

[1] Weber, L. A., P-V-T, Thermodynamic and Related Properties of Oxygen from the Triple Point to 300 K at Pressures to 33 MN/m^2, J. Res. Nat. Bur. Stand. (U.S.), 74A, No. 1, 93 (1970).

[2] Goodwin, R. D. and Weber, L. A., Specific Heats C_v of Fluid Oxygen from the Triple Point to 300 K at Pressures to 350 Atmospheres, J. Res. Nat. Bur. Stand. (U.S.), 73A, No. 1, 15 (1969).

[3] Goodwin, R. D. and Weber, L. A., Specific Heats of Oxygen at Coexistence, J. Res. Nat. Bur. Stand. (U.S.), 73A, No. 1, 1 (1969).

[4] Straty, G. C. and Younglove, B. A., Velocity of Sound in Saturated and Compressed Fluid Oxygen, J. Chem. Therm. 5, 305 (1973).

[5] Younglove, B. A., Dielectric Constant of Compressed Gaseous and Liquid Oxygen, J. Res. Nat. Bur. Stand. (U.S.), 76A, No. 1, 37 (1973).

[6] Haynes, W. M., Measurements of the Viscosity of Compressed Gaseous and Liquid Oxygen, submitted for publication to Physica.

[7] Goodwin, R. D., Nonanalytic Vapor Pressure Equation with Data for Nitrogen and Oxygen, J. Res. Nat. Bur. Stand. (U.S.), 73A, No. 5, 487 (1969); also Prydz, R., An Improved Oxygen Vapor Pressure Representation, Metrologia 8, No. 1, 1 (1972).

[8] Weber, L. A., Density and Compressibility of Oxygen in the Critical Region, Phys. Rev. A 6, No. 6, 2379 (1970).

[9] Weber, L. A., Extrapolation of Thermophysical Properties Data for Oxygen to High Pressures (5,000 to 10,000 PSIA) at Low Temperatures (100 - 600°R), Nat. Bur. Stand. (U.S.), Internal Report No. 10727 (1971).

[10] Goodwin, R. D., Apparatus for Determination of Pressure-Density-Temperature Relations, and Specific Heats of Hydrogen to 350 Atmospheres and at Temperatures above 14 K, J. Res. Nat. Bur. Stand. (U.S.), 65C, 231 (1961).

[11] Prydz, R. and Straty, G. C., The Thermodynamic Properties of Compressed Gaseous and Liquid Fluorine, Nat. Bur. Stand. (U.S.), Tech. Note 392 (Revised) (1973).

[12] The International Practical Temperature Scale of 1968, Metrologia 5, No. 2, 35 (1969); also Bedford, R. E., Durieux, M., Muijlwijk, R. and Barber, C. R., Relationships Between the International Practical Temperature Scale of 1968 and the NBS-55, NPL-61, PRMI-54, and PSU-54 Temperature Scales in the Range from 13.81 to 90.188 K, Metrologia 5, No. 2, 47 (1969).

[13] Weber, L. A., Thermodynamic and Related Properties of Parahydrogen from the Triple Point to 300 K at Pressures to 1000 Bar, Nat. Bur. Stand. (U.S.), Internal Report No. 74-374, National Aeronautics and Space Administration Special Publication 3088 (1975).

[14] Streett, W. B. and Sagan, L. S., PVT Data for Oxygen from 90 to 250 K and Pressures to 684 Atm, Adv. in Cry. Eng. 20, 240 (1975).

[15] Wagner, W., New Vapor Pressure Measurements and a New Rational Vapor-Pressure Equation for Oxygen, J. Chem. Therm. 8, 1049 (1976).

[16] Woolley, H. W., Thermodynamic Functions for Molecular Oxygen in the Ideal Gas State, J. Res. Nat. Bur. Stand. (U.S.), 40, 163 (1948).

[17] Giauque, W. F. and Johnston, H. L., The Heat Capacity of Oxygen from 12 K to its Boiling Point and its Heat of Vaporization. The Entropy from Spectroscopic Data, J. Am. Chem. Soc. 51, 2300 (1929).

[18] van Itterbeek, A. and van Dael, W., Velocity of Sound in Liquid Oxygen and Liquid Nitrogen as a Function of Temperature and Pressure, Physica 28, No. 9, 861 (1962).

[19] Furukawa, G. T. and McCoskey, R. E., NACA Tech. Note 2969 (1953).

[20] Roder, H. M., Weber, L. A. and Goodwin, R. D., Thermodynamic and Related Properties of Para-Hydrogen from the Triple Point to 100 K at Pressures to 340 Atmospheres, Nat. Bur. Stand. Monograph No. 94 (1965).

[21] Goodwin, R. D., The Thermophysical Properties of Methane, from 90 to 500 K at Pressures to 700 Bar, Nat. Bur. Stand. (U.S.), Tech. Note 653 (1974).

[22] Straty, G. C. and Tsumura, R., PVT and Vapor Pressure Measurements on Ethane, J. Res. Nat. Bur. Stand. (U.S.) 80A, No. 1, 35 (1976).

Table VII. Comparison of Calculated and Measured Heats of Vaporization (J/mol)

T	Calculated - This Research			Experimental	
	ΔH	$T\Delta S$	Clapeyron Equation	Ref [17]	Ref [19]
54.359	7761	7759	7730		
60	7624	7623	7624		
68.4	7417	7415	7423		7418
70	7377	7375	7382		
76	7222	7219	7224		7228
80	7114	7111	7114		
84.1	6998	6996	6996		7005
90.188	6814	6812	6810	6815 $\pm$ 7	6825
100	6477	6474	6470		
110	6062	6061	6052		
120	5550	5549	5538		
130	4896	4897	4887		
140	4004	4005	4005		
150	2547	2547	2537		
154	1169	1169	1160		

Appendix A. Parameters for the Second and Third Virial Coefficients (low density region, equation (2) in text)

(a) Second virial coefficient, in (cm^3/mol).

$$B = \sum_{J=1}^{5} B_J \, T^{(1 - J)/4}$$

$$B_1 = -8.638\ 001\ 288 \times 10^{2}$$
$$B_2 = 1.733\ 064\ 315 \times 10^{4}$$
$$B_3 = -1.241\ 961\ 054 \times 10^{5}$$
$$B_4 = 3.956\ 609\ 285 \times 10^{5}$$
$$B_5 = -4.904\ 475\ 356 \times 10^{5}$$

(b) Third virial coefficient, in $(cm^3/mol)^2$.

$$C = \sum_{J=1}^{6} C_J \, T^{(1 - J)/2}$$

$$C_1 = 3.569\ 552\ 013 \times 10^{5}$$
$$C_2 = -2.696\ 578\ 423 \times 10^{7}$$
$$C_3 = 8.152\ 809\ 009 \times 10^{8}$$
$$C_4 = -1.229\ 796\ 911 \times 10^{10}$$
$$C_5 = 9.252\ 345\ 993 \times 10^{10}$$
$$C_6 = -2.771\ 904\ 509 \times 10^{11}$$

Appendix B. Fixed Points and Phase Boundaries, Thermal Properties of Ideal Gas and Real Gas at STP

(a) Triple Point:

$$T_t = 54.359 \pm .002 \text{ K}$$
$$P_t = 0.001464 \text{ bar}$$
$$\rho_t(\text{liquid}) = 0.04083 \text{ mol/cm}^3$$

(b) Normal Boiling Point:

$$T_b = 90.188 \text{ K}$$
$$P_b = 1.0 \text{ atm} = 1.01325 \text{ bar}$$
$$\rho_b(\text{liquid}) = 0.03566 \text{ mol/cm}^3$$
$$\rho_b(\text{gas}) = 0.0001397 \text{ mol/cm}^3$$

(c) Critical Point:

$$T_c = 154.581 \text{ K}$$
$$P_c = 50.43 \text{ bar}$$
$$\rho_c = 0.01363 \text{ mol/cm}^3$$

(d) Melting Pressure: (bar)

$$P = P_t + P_o \left[(T/T_t)^c - 1\right]$$
$$P_o = 2672.27, \quad c = 1.769$$

(e) Liquid-Vapor Coexistence Densities, (mol/cm^3):

$$\rho_{SAT}(\text{liquid}) = \rho_{RD} + f(T)$$

$$\rho_{SAT}(\text{vapor}) = \rho_{RD} - f(T)$$

where

$$\rho_{RD} = \rho_c + a_1 (T_c - T) + a_2 (T_c - T)^2$$

$$f(T) = \rho_c \sum_{J=1}^{3} A_J \left(\frac{T_c - T}{T_c}\right)^{(2J-1)\beta}$$

$A_1 = 1.811\ 3127$ $\quad\quad$ $\beta = 0.353$

$A_2 = 2.775\ 1793 \times 10^{-1}$ $\quad\quad$ $a_1 = 6.0402 \times 10^{-5}$

$A_3 = -7.580\ 9408 \times 10^{-1}$ $\quad\quad$ $a_2 = 9.80 \times 10^{-8}$

The above relations were used from 150 K to T_c for the vapor, and from 128 K to T_c for the liquid. Below these temperatures the densities were found by the intersection of equations (2) or (5), respectively with the vapor pressure curve.

(f) Vapor Pressure:

$$\ell n(P/P_t) = A\chi + B\chi^2 + C\chi^3 + D\chi(1 - \chi)^{\varepsilon}$$

$$\chi = (1 - T_t/T)/(1 - T_t/T_c)$$

$A = 7.797\ 7723$

$B = 4.577\ 3000$

$C = -1.928\ 1264$

$D = 3.293\ 1232$

$\varepsilon = 1.5$

(g) Molecular Weight of Oxygen: 31.9988 g/mol:

(h) Ideal Gas Thermodynamic Properties:

$$\frac{C_p^o(T)}{R} = \sum_{J=1}^{7} A_J T^{(J-4)} + A_8 \frac{u^2 e^u}{(e^u - 1)^2}$$

where $u = A_9/T$

$A_1 = -1.86442361 \times 10^2$ $\quad\quad$ $A_6 = -1.11035799 \times 10^{-8}$

$A_2 = 2.07840241 \times 10$ $\quad\quad$ $A_7 = 2.08612876 \times 10^{-11}$

$A_3 = -3.42642911 \times 10^{-1}$ $\quad\quad$ $A_8 = 1.01894691$

$A_4 = 3.50297163$ $\quad\quad$ $A_9 = 2.23918105 \times 10^3$

$A_5 = 2.05866482 \times 10^{-7}$

At T = 55 K, P = 1 atm

H° = 49.718 J/g

S° = 4.8696 J/g-K

(i) Real Gas Thermodynamic Properties at Standard Conditions (T = 273.15 K, P = 1 atm)

H = 248.07 J/g

S = 6.328 J/g-K

Appendix C. Brief History of the PVT Sample Holder

The PVT sample holder used previously by this laboratory has now been retired and replaced by a new one. It therefore seems appropriate to summarize its history. The design, fabrication and original calibration were performed by R. D. Goodwin, and the descriptions are given by him in ref. [10]. Briefly, it is a heavy-walled cylindrical container made of electrolytic tough pitch copper, having the dimensions 2" O.D., 5/8" I.D., wall thickness 11/16", and length 8 1/2". A heater wire was wrapped around the cylinder, and a platinum thermometer well was drilled in the top end. The sample cavity (5/8" by approximately 5") had a volume of about 25.85 cm^3 at standard conditions. A stainless steel capillary tube (0.013" I.D.) was used for filling and for communication with the pressure gauge.

This sample holder has been used for measurements (in chronological order) on p-H_2 [20], O_2 [1], F_2 [11], CH_4 [21], p-H_2 [13], C_2H_6 [22], and the present work on oxygen. All measurements were made at pressures up to about 350 bar except ref. [13] and the present work. Independent volume calibrations from the first four references above indicated an average volume of 25.88 $\pm$ 0.03 cm^3. Later, in ref. [13] it was pressured to 850 bar and the volume expanded inelastically by 5.2%. In this work experimental pressures of 795-817 bar were attained on several occasions, resulting in further increases in the volume totaling 0.7%. Thus we conclude that these measurements define the elastic limit of a vessel of these dimensions and construction.

Table IV. Parameters for Equation (5)

$A_1 = 2.163\ 315\ 605$

$A_2 = -4.951\ 878\ 499 \times 10^2$

$A_3 = 2.218\ 375\ 056 \times 10^4$

$A_4 = -5.257\ 882\ 219 \times 10^4$

$A_5 = -1.747\ 330\ 429 \times 10^2$

$A_6 = 3.800\ 674\ 644 \times 10^4$

$A_7 = -1.275\ 638\ 488 \times 10^6$

$A_8 = 2.485\ 625\ 682 \times 10^6$

$A_9 = -2.677\ 274\ 930 \times 10^7$

$A_{10} = 4.814\ 034\ 026 \times 10^3$

$A_{11} = -9.872\ 472\ 202 \times 10^5$

$A_{12} = 1.603\ 575\ 028 \times 10^7$

$A_{13} = -4.659\ 223\ 596 \times 10^4$

$A_{14} = 9.412\ 696\ 699 \times 10^6$

$R = 82.0597$

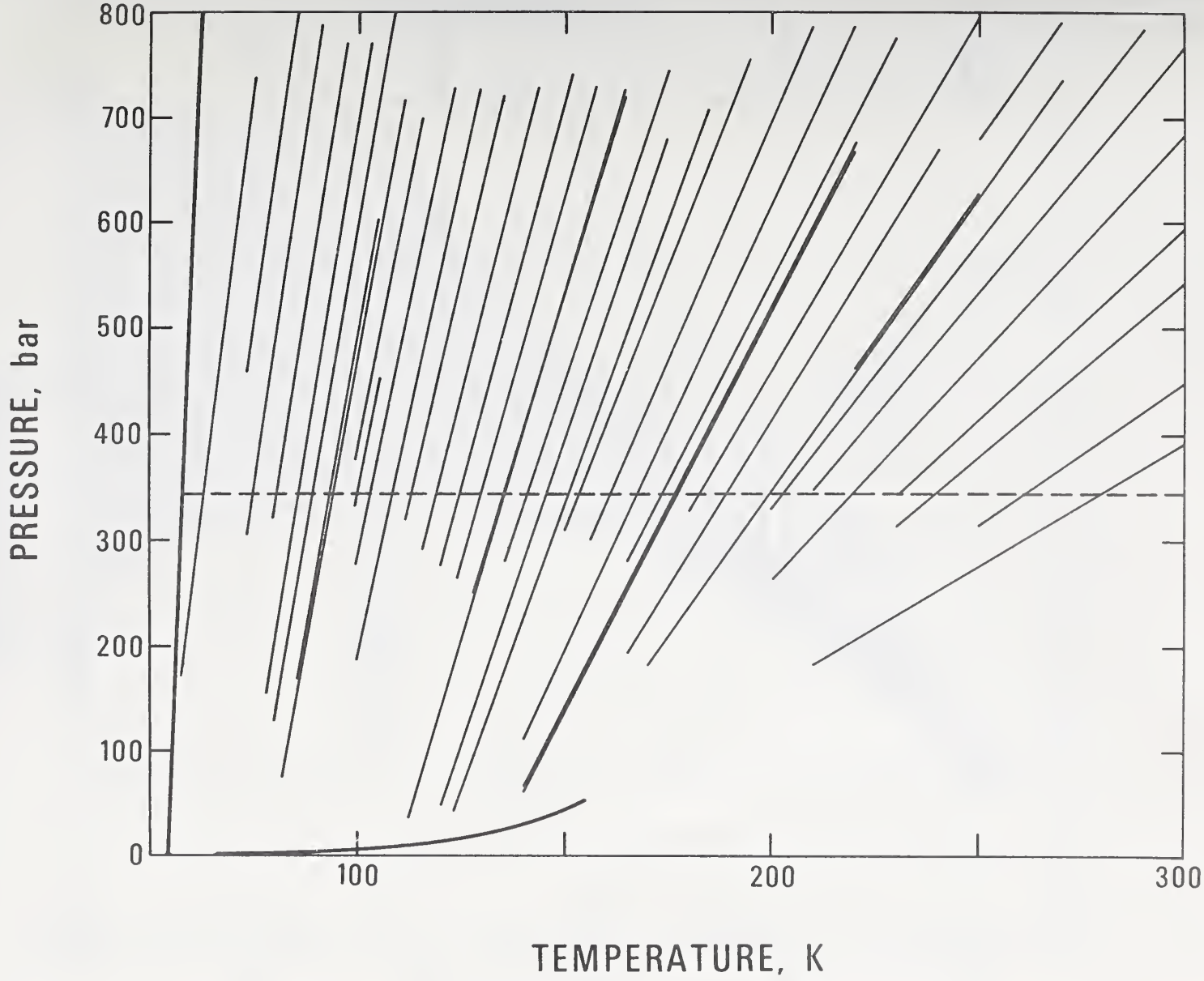

Figure 1. Experimental isochores. Dashed line indicates limit of earlier NBS data.

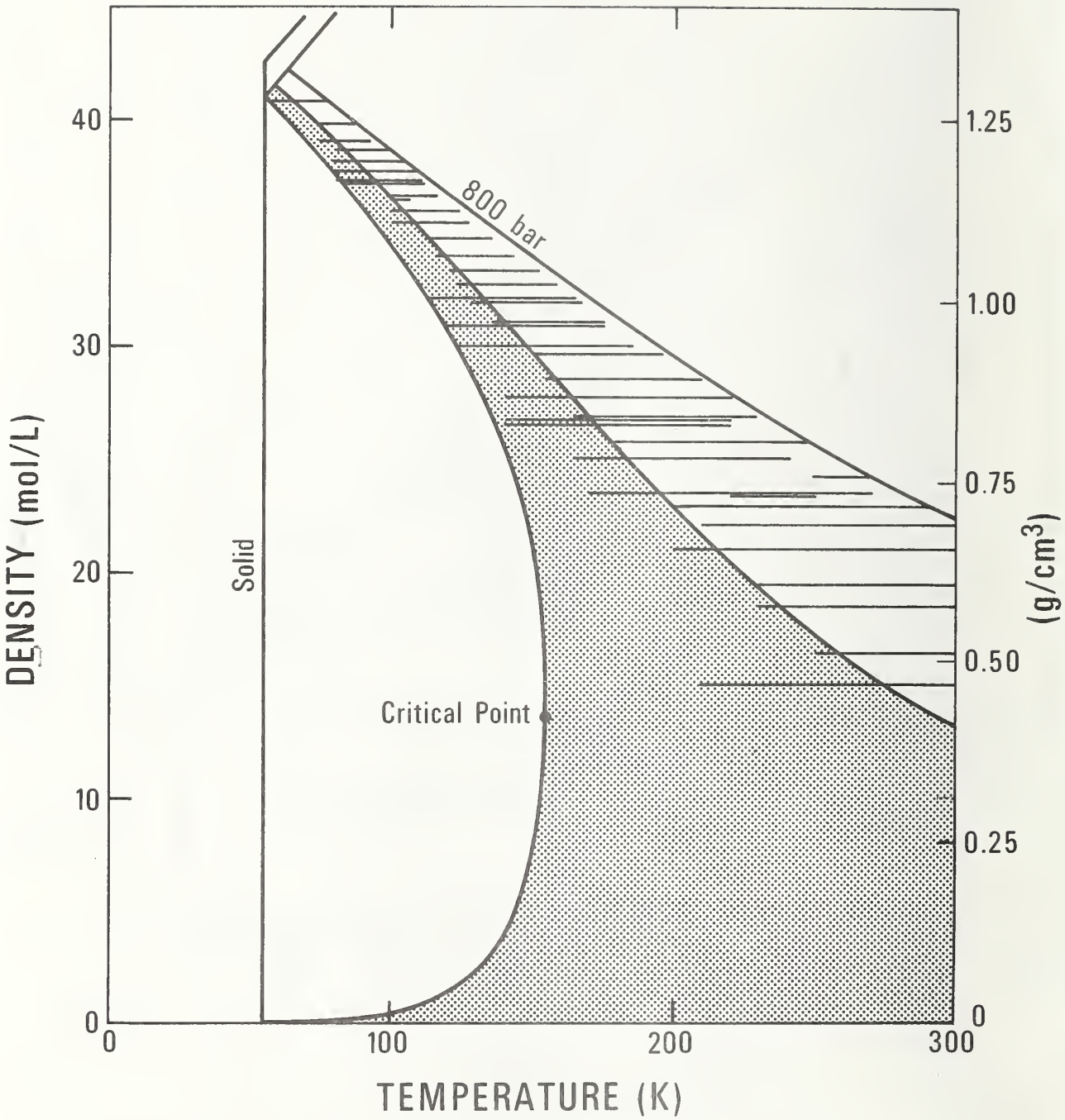

Figure 2. New experimental isochores (horizontal lines); shaded area shows the region of earlier NBS data.

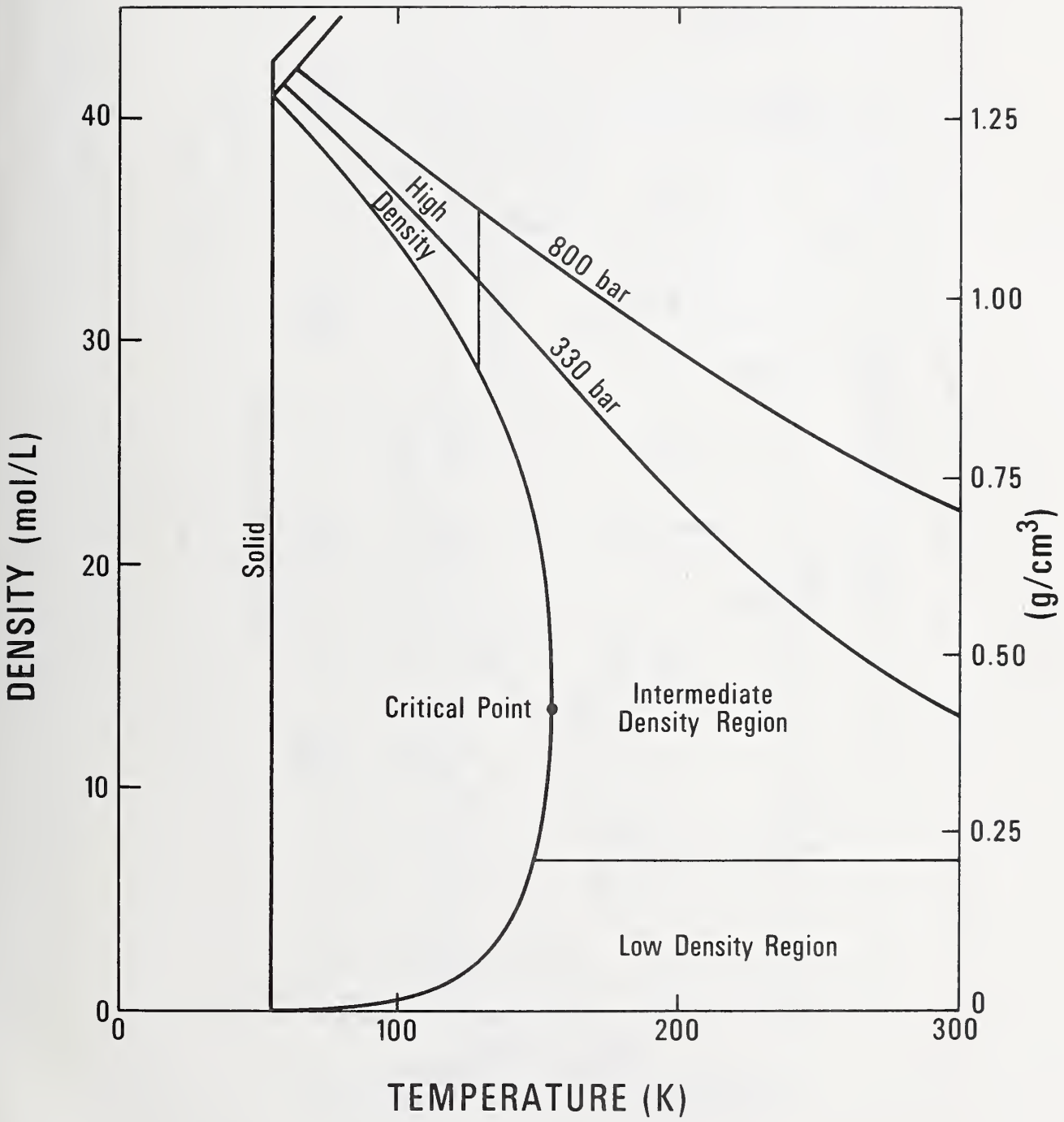

Figure 3. The three regions for representation of the data.

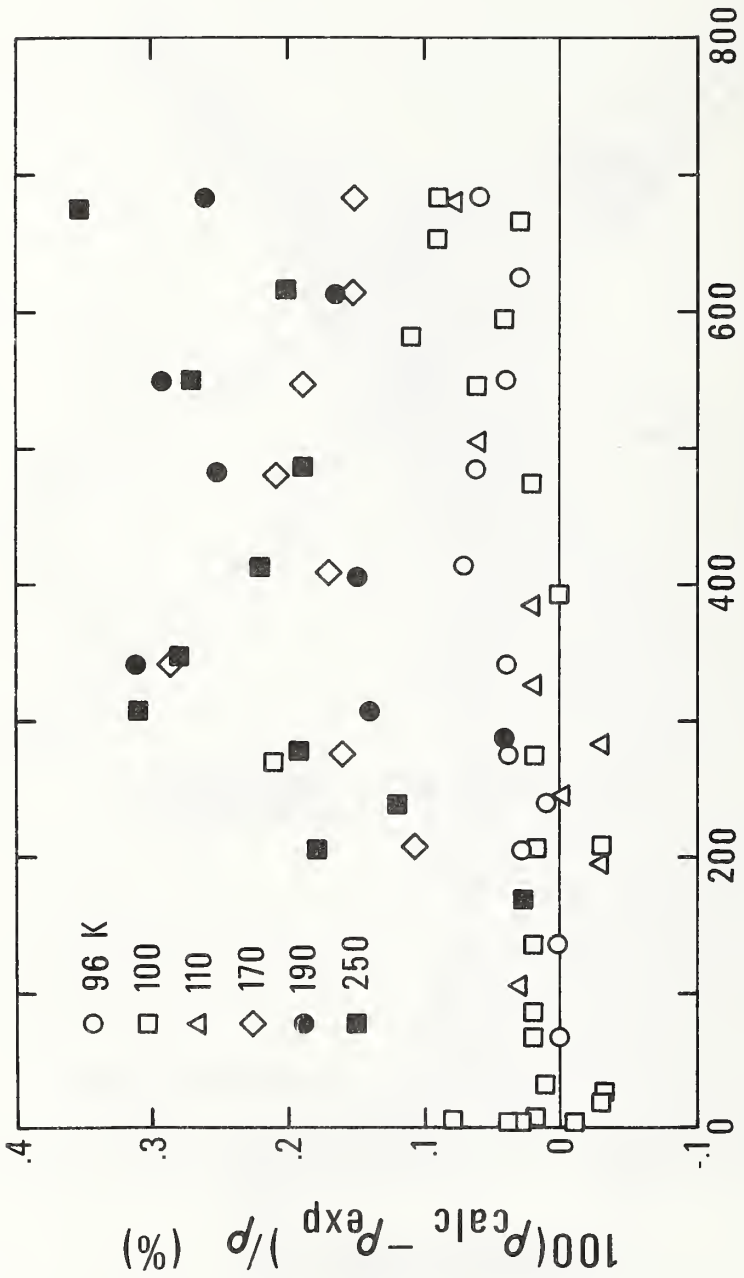

Figure 4. Comparison with the densities of Streett and Sagan [13].

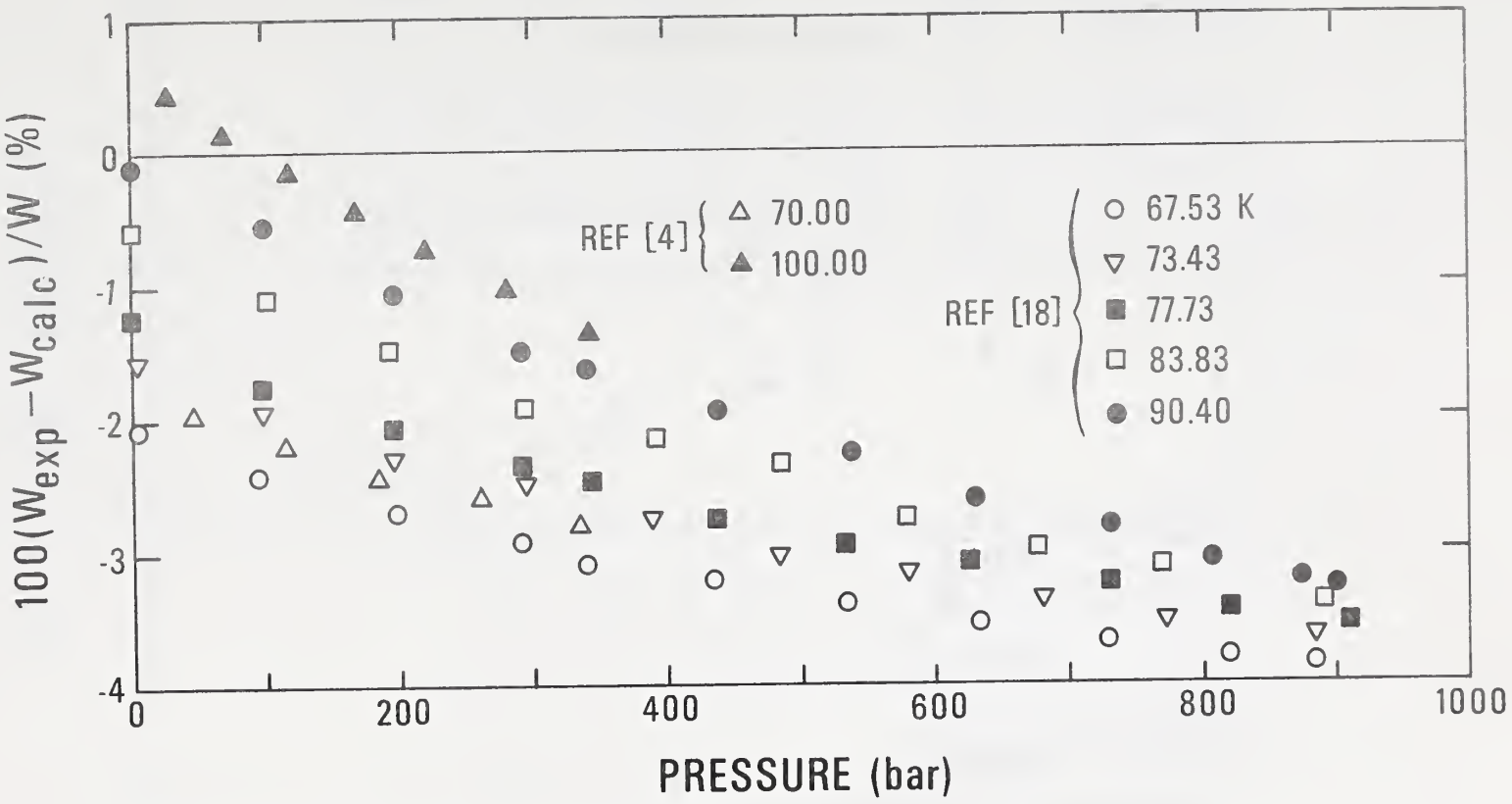

Figure 6. Comparison with experimental sound velocities in the compressed liquid.

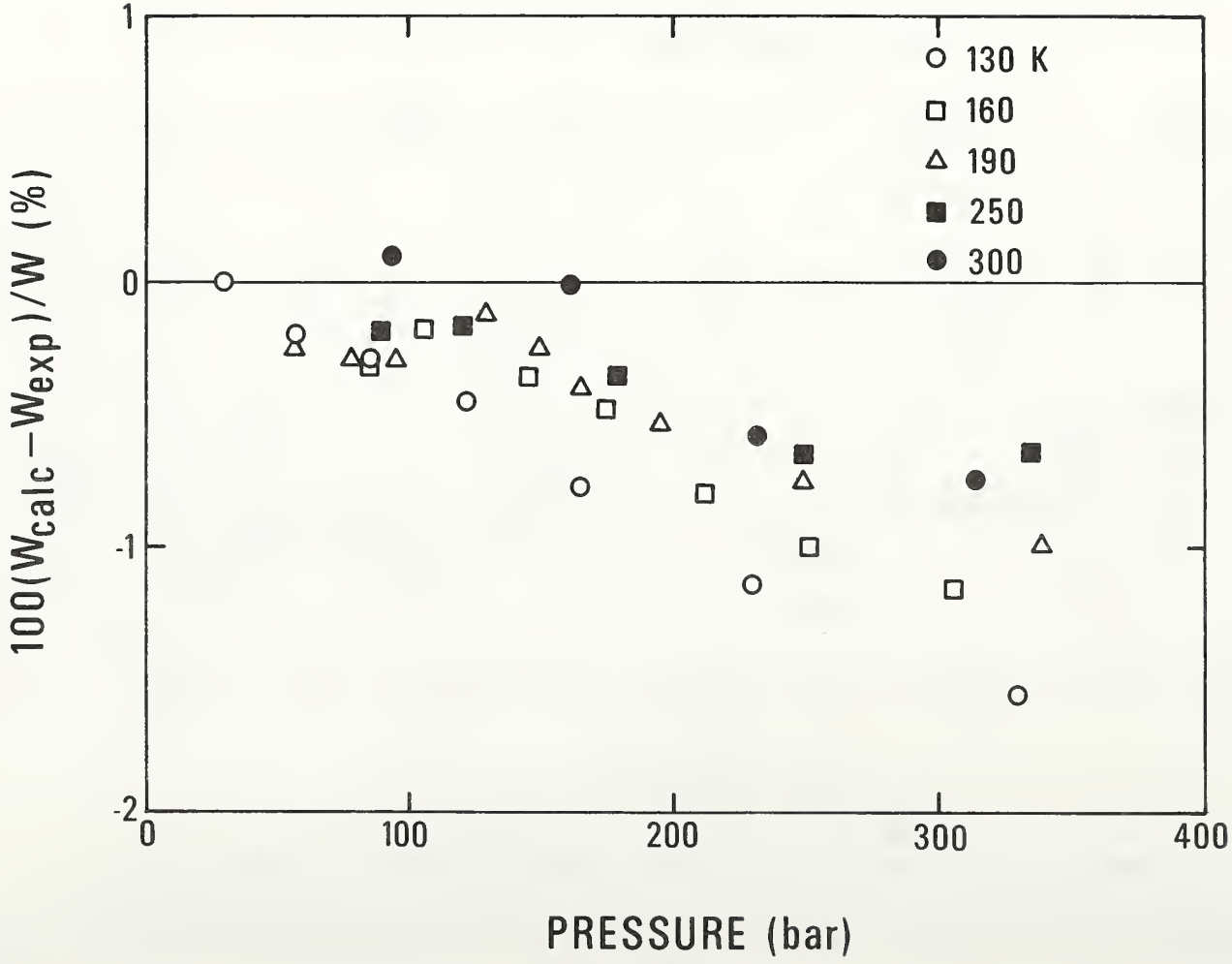

Figure 5. Comparison with the sound velocity data of Straty and Younglove [4].

TABLE I. PVT DATA FOR OXYGEN.

IDENT.	TEMP. K	PRESS. BAR	DENSITY MOL/L	DIFF PCT
101	82.0	76.180	37.298	.08
102	92.0	300.250	37.148	.05
103	96.0	388.338	37.103	.05
104	98.0	432.041	37.083	.05
105	100.0	475.505	37.064	.05
106	102.0	518.591	37.047	.05
107	104.0	558.451	37.030	.01
108	106.0	601.093	37.014	.02
109	108.0	643.186	36.999	.02
110	110.0	685.144	36.985	.03
111	112.0	726.553	36.972	.03
201	123.0	42.672	30.370	-.05
202	165.0	507.609	30.073	-.02
203	170.0	560.205	30.051	-.01
204	175.0	612.459	30.029	-.01
205	180.0	664.129	30.008	-.01
206	185.0	715.319	29.989	-.02
301	140.0	62.203	26.849	.01
302	175.0	338.532	26.647	-.02
303	180.0	377.032	26.625	-.01
304	190.0	453.073	26.584	-.01
305	195.0	490.684	26.566	-.00
306	200.0	527.845	26.548	-.01
307	210.0	601.971	26.513	-.01
308	220.0	674.862	26.481	-.00
401	112.0	35.526	32.350	-.02
402	132.0	310.471	32.151	.01
403	138.0	390.125	32.108	.01
404	142.0	442.714	32.083	.01
405	146.0	494.721	32.060	.01
406	150.0	546.316	32.039	.01
407	154.0	597.226	32.018	.01
408	158.0	647.654	31.999	.01
409	160.0	672.664	31.990	.00
410	165.0	734.879	31.967	-.00
501	120.0	48.851	31.022	.06
502	142.0	312.263	30.831	-.00
503	144.0	335.610	30.817	.01
504	148.0	382.170	30.792	.00
505	152.0	428.388	30.769	-.00
506	156.0	474.264	30.747	.01
507	160.0	519.695	30.727	.02
508	165.0	575.657	30.704	.02
509	170.0	631.333	30.681	.02
510	175.0	686.313	30.660	.01
601	100.0	382.070	36.627	-.03
602	102.0	423.641	36.607	-.03
603	104.0	465.076	36.586	-.02
604	108.0	547.087	36.556	-.02
605	112.0	628.073	36.527	-.00
606	116.0	707.583	36.500	.01
701	100.0	280.835	36.061	.01
702	106.0	399.008	35.998	.01
703	108.0	437.370	35.982	-.01
704	110.0	474.975	35.966	-.02
705	112.0	512.859	35.950	-.03
706	114.0	550.772	35.935	-.03
707	116.0	588.902	35.921	-.02
708	118.0	626.757	35.907	-.01
709	120.0	664.302	35.894	.01
710	122.0	701.643	35.881	.02
711	124.0	738.641	35.869	.03
801	100.0	189.958	35.527	-.05
802	110.0	376.528	35.418	-.06
803	112.0	413.447	35.401	-.06
804	114.0	450.157	35.385	-.05
805	116.0	486.663	35.369	-.04
806	118.0	523.196	35.354	-.03
807	120.0	559.256	35.340	-.02
808	122.0	595.111	35.327	-.01
809	124.0	630.693	35.314	.01
810	126.0	666.037	35.301	.03
811	128.0	701.137	35.289	.04
812	130.0	735.965	35.278	.01
901	112.0	323.057	34.836	-.07
902	116.0	392.725	34.800	-.06
903	118.0	427.235	34.783	-.05
904	122.0	495.843	34.753	-.03
905	126.0	563.733	34.726	.00
906	128.0	597.318	34.714	.02
907	130.0	630.732	34.701	-.00
908	132.0	663.872	34.690	.01
909	134.0	696.874	34.678	.01
910	136.0	729.740	34.667	.00
1001	116.0	295.280	34.132	-.06
1002	122.0	392.503	34.081	-.04
1003	124.0	424.705	34.065	-.03
1004	126.0	456.668	34.051	-.02
1005	128.0	488.550	34.037	-.00
1006	130.0	520.214	34.024	-.01
1007	132.0	551.696	34.011	-.00
1008	134.0	583.070	34.001	-.01
1009	136.0	614.449	33.989	.00
1010	138.0	645.350	33.978	.00
1011	140.0	676.077	33.967	.01
1012	142.0	706.634	33.956	.00
1013	144.0	737.123	33.946	-.00

TABLE I. PVT DATA FOR OXYGEN.

IDENT.	TEMP. K	PRESS. BAR	DENSITY MOL/L	DIFF PCT
1101	120.0	273.599	33.478	-.05
1102	126.0	400.127	33.413	-.01
1103	130.0	480.158	33.398	-.02
1104	132.0	480.121	33.385	-.01
1105	134.0	439.911	33.372	-.01
1106	136.0	519.533	33.360	.00
1107	138.0	540.947	33.348	-.00
1108	140.0	577.760	33.335	.00
1109	142.0	606.901	33.324	.00
1110	144.0	635.904	33.313	.01
1111	146.0	664.770	33.303	.01
1112	148.0	693.426	33.293	.02
1113	150.0	721.813	33.283	.01
1114	152.0	749.930	33.274	.02
1201	124.0	267.856	32.853	-.05
1202	132.0	382.118	32.789	-.03
1203	136.0	438.565	32.761	-.01
1204	138.0	466.532	32.749	-.02
1205	140.0	494.527	32.737	-.01
1206	142.0	522.254	32.726	-.01
1207	144.0	549.844	32.714	.00
1208	146.0	577.252	32.703	-.00
1209	148.0	604.278	32.692	-.00
1210	150.0	631.491	32.682	-.00
1211	152.0	658.633	32.673	.00
1212	154.0	685.502	32.663	.01
1213	156.0	712.303	32.653	.00
1214	158.0	738.958	32.644	-.01
1301	128.0	250.948	32.141	-.03
1302	140.0	410.148	32.052	-.02
1303	142.0	436.252	32.041	-.03
1304	144.0	462.359	32.029	-.01
1305	146.0	488.329	32.017	-.02
1306	148.0	514.126	32.006	-.01
1307	150.0	539.820	31.995	-.01
1308	152.0	565.411	31.985	-.01
1309	154.0	590.833	31.975	-.01
1310	156.0	615.930	31.964	-.01
1311	158.0	641.135	31.954	-.00
1312	160.0	666.247	31.945	-.01
1313	165.0	728.426	31.923	-.00
1401	136.0	283.954	31.361	-.03
1402	144.0	382.393	31.306	-.02
1403	146.0	406.834	31.294	-.02
1404	148.0	431.046	31.282	-.02
1405	150.0	455.293	31.270	-.02
1406	152.0	479.333	31.259	-.02
1407	154.0	503.236	31.249	-.02
1408	156.0	527.173	31.239	-.01
1409	158.0	551.007	31.229	.00
1410	160.0	574.602	31.219	-.00
1411	165.0	633.230	31.196	.01
1412	170.0	691.344	31.174	-.01
1413	175.0	748.566	31.153	-.01

IDENT.	TEMP. K	PRESS. BAR	DENSITY MOL/L	DIFF PCT
1501	150.0	311.237	29.732	-.04
1502	158.0	394.817	29.686	-.04
1503	160.0	415.514	29.675	-.02
1504	165.0	466.969	29.650	-.02
1505	170.0	517.978	29.627	.00
1506	175.0	568.504	29.604	.01
1507	180.0	618.588	29.583	.01
1508	185.0	668.124	29.563	.01
1509	190.0	717.145	29.544	-.02
1510	195.0	765.408	29.526	-.02
1601	140.0	110.001	28.137	-.06
1602	170.0	378.234	27.954	-.06
1603	175.0	421.847	27.931	-.05
1604	180.0	465.105	27.909	-.04
1605	185.0	508.226	27.889	-.03
1606	195.0	592.765	27.850	-.03
1607	200.0	634.699	27.832	-.03
1608	210.0	717.334	27.798	-.03
1609	220.0	795.944	27.766	-.04
1701	156.0	302.947	28.761	-.01
1702	165.0	388.422	28.712	.01
1703	170.0	435.338	28.688	.03
1704	175.0	481.954	28.665	.03
1705	180.0	528.118	28.644	.04
1706	185.0	573.964	28.624	.03
1707	190.0	619.364	28.604	.03
1708	195.0	664.317	28.586	.04
1709	200.0	708.860	28.568	.01
1710	210.0	796.228	28.534	.00
1801	80.0	324.394	38.755	-.03
1802	82.0	375.972	38.729	-.03
1803	84.0	427.667	38.705	-.03
1804	86.0	479.192	38.683	-.03
1805	88.0	530.306	38.663	-.02
1806	90.0	581.836	38.644	-.01
1807	92.0	631.507	38.627	-.02
1808	94.0	681.525	38.611	-.01
1809	96.0	730.995	38.595	-.01
1810	98.0	779.778	38.580	-.01
1901	78.0	155.852	38.272	-.03
1902	86.0	351.684	38.152	-.04
1903	88.0	400.622	38.129	-.03
1904	90.0	449.043	38.107	-.03
1905	92.0	497.467	38.087	-.03
1906	94.0	545.482	38.068	-.03
1907	96.0	592.523	38.050	-.02
1908	98.0	640.054	38.035	-.02
1909	100.0	686.937	38.019	-.02
1910	102.0	733.443	38.005	-.01
1911	104.0	779.570	37.991	-.01

TABLE I. PVT DATA FOR OXYGEN.

IDENT.	TEMP. K	PRESS. BAR	DENSITY MOL/L	DIFF PCT
2001	80.0	128.897	37.874	-.02
2002	90.0	364.155	37.729	-.03
2003	92.0	410.689	37.706	-.03
2004	94.0	457.351	37.686	-.03
2005	96.0	503.707	37.668	-.02
2006	98.0	549.620	37.650	-.02
2007	100.0	595.295	37.633	-.02
2008	102.0	640.521	37.618	-.01
2009	104.0	685.479	37.603	-.00
2010	106.0	729.953	37.588	.00
2011	108.0	773.981	37.575	.01
2012	110.0	817.664	37.562	.02
2101	74.0	465.025	39.969	.04
2102	76.0	523.440	39.946	.04
2103	78.0	581.754	39.925	.05
2104	80.0	639.553	39.905	.05
2105	82.0	696.976	39.887	.05
2106	84.0	753.648	39.869	.05
2107	86.0	809.657	39.853	.05
2201	74.0	339.426	39.406	.02
2202	76.0	365.006	39.377	.02
2203	78.0	420.452	39.351	.02
2204	80.0	475.490	39.328	.03
2205	82.0	530.496	39.306	.03
2206	84.0	584.987	39.286	.03
2207	86.0	639.136	39.269	.04
2208	88.0	692.737	39.251	.04
2209	90.0	745.927	39.235	.04
2210	92.0	798.639	39.219	.05
2301	165.0	281.456	27.084	-.02
2302	170.0	321.883	27.059	-.01
2303	180.0	401.918	27.013	.01
2304	185.0	441.559	26.992	.01
2305	190.0	480.937	26.973	.02
2306	195.0	519.758	26.953	.02
2307	200.0	558.576	26.935	.03
2308	210.0	635.415	26.902	.03
2309	220.0	710.925	26.869	.05
2310	230.0	784.892	26.838	-.00
2401	165.0	194.048	25.116	-.04
2402	195.0	392.311	24.986	-.02
2403	200.0	424.851	24.968	-.00
2404	210.0	489.119	24.934	.00
2405	230.0	615.355	24.872	.01
2406	240.0	677.533	24.843	.02
2501	170.0	184.862	23.796	-.05
2502	210.0	415.984	23.642	-.03
2503	220.0	472.409	23.611	-.02
2504	230.0	528.204	23.581	-.01
2505	240.0	583.383	23.553	-.01
2506	250.0	638.015	23.526	.00
2508	270.0	745.446	23.472	-.01

IDENT.	TEMP. K	PRESS. BAR	DENSITY MOL/L	DIFF PCT
2601	58.0	172.477	40.633	.01
2602	60.0	237.056	40.896	.01
2603	64.0	366.143	40.825	.02
2604	66.0	430.891	40.796	.02
2606	70.0	559.085	40.745	.03
2607	72.0	622.811	40.725	.03
2608	74.0	685.359	40.704	.04
2609	76.0	747.450	40.685	.04
2701	200.0	266.302	21.107	-.05
2702	230.0	398.681	21.016	-.03
2703	240.0	442.133	20.991	-.02
2704	250.0	485.136	20.965	-.04
2705	260.0	527.868	20.941	-.02
2706	270.0	570.092	20.916	-.02
2707	280.0	612.047	20.892	-.02
2708	290.0	653.693	20.869	-.02
2709	300.0	694.934	20.846	-.01
2801	220.0	468.832	23.552	-.05
2802	230.0	524.295	23.522	-.03
2803	240.0	579.259	23.494	-.02
2804	250.0	633.649	23.467	-.01
2901	180.0	332.497	25.845	-.03
2902	185.0	368.117	25.824	-.03
2903	190.0	403.350	25.804	-.03
2904	195.0	438.188	25.785	-.01
2905	200.0	473.412	25.766	-.00
2906	210.0	542.535	25.732	-.00
2907	220.0	610.624	25.700	-.01
2908	230.0	677.880	25.668	.00
2909	240.0	744.415	25.640	-.01
2910	250.0	805.947	25.612	-.03
3101	210.0	353.120	22.231	.02
3102	220.0	402.527	22.201	.03
3103	230.0	451.501	22.172	.04
3104	240.0	499.994	22.144	.04
3105	250.0	548.041	22.119	.02
3106	260.0	595.713	22.094	.02
3107	270.0	642.833	22.069	.03
3108	280.0	689.464	22.046	.01
3109	290.0	735.763	22.022	.01
3110	300.0	780.937	21.998	.01
3201	230.0	345.748	19.600	-.01
3202	240.0	383.559	19.575	-.00
3203	250.0	421.128	19.550	-.01
3204	260.0	458.390	19.527	.01
3205	270.0	495.379	19.504	.01
3206	280.0	568.539	19.458	.02
3207	300.0	604.637	19.437	.01

TABLE I. PVT DATA FOR CXYGEN.

IDENT.	TEMP. K	PRESS. BAR	DENSITY MOL/L	DIFF PCT
14601	100.0	336.427	36.391	-.05
14602	102.0	377.166	36.370	-.04
14603	104.0	417.667	36.351	-.04
14604	106.0	457.858	36.333	-.04
14701	230.0	316.385	18.675	-.02
14702	240.0	350.868	18.651	-.00
14703	250.0	385.113	18.627	-.01
14704	260.0	419.048	18.604	-.01
14705	270.0	452.799	18.581	-.00
14706	280.0	486.317	18.558	.02
14707	290.0	519.554	18.537	.01
14708	300.0	552.581	18.516	-.00
14801	250.0	318.318	16.570	.00
14802	260.0	345.832	16.550	.00
14803	270.0	373.175	16.529	.00
14804	280.0	400.347	16.510	.01
14805	290.0	427.313	16.491	-.00
14806	300.0	454.145	16.472	-.01
14901	250.0	639.439	24.210	.06
14902	260.0	746.765	24.181	-.01
14903	270.0	803.057	24.158	-.00
15001	140.0	05.000	26.946	-.02
15002	180.0	382.735	26.720	-.01
15003	190.0	459.607	26.679	-.01
15004	200.0	535.414	26.642	.01
15005	210.0	610.161	26.608	.01
15006	220.0	683.709	26.576	.02
15101	210.0	183.752	15.188	-.09
15102	220.0	207.855	15.168	-.08
15103	230.0	231.804	15.148	-.07
15104	240.0	255.598	15.128	-.06
15105	250.0	279.256	15.108	-.04
15106	260.0	302.764	15.089	-.05
15107	270.0	326.113	15.070	-.04
15108	280.0	349.311	15.052	-.05
15109	290.0	372.352	15.034	-.05
15110	300.0	395.276	15.016	-.04
15201	86.0	170.593	37.295	-.05
15202	90.0	259.945	37.237	-.06
15203	98.0	436.920	37.146	-.06
15204	106.0	610.211	37.079	-.04
15205	86.0	170.171	37.296	-.06
15206	94.0	348.410	37.188	-.07
15207	102.0	524.059	37.111	-.05
15208	98.0	436.677	37.146	-.06

TABLE II. PARAMETERS USED IN EQUATION(3), WITH P IN ATMOSPHERES, DENSITY IN MOL/CM^3.

T=128			
-.7387696373E+04	.8613573588E+06	-.3520273723E+08	.4812801940E+09
T=130			
-.6904662570E+04	.8148007566E+06	-.3371703659E+08	.4662686879E+09
T=132			
-.3927074481E+04	.4385347307E+06	-.1595389526E+08	.9553876267E+08
.2902875300E+10			
T=134			
-.3919936983E+04	.4543231306E+06	-.1756369095E+08	.1494163545E+09
.2324207873E+10			
T=136			
.1585355029E+04	-.2828579479E+06	.1934547989E+08	-.6690118927E+09
.9123408719E+10			
T=138			
.4156712924E+03	-.1178818535E+06	.1062726677E+08	-.4641521929E+09
.7337562395E+10			
T=140			
.1964224053E+04	-.3289823003E+06	.2135015760E+08	-.7042983480E+09
.9356743017E+10			
T=142			
.2034302457E+04	-.3424520724E+06	.2220127022E+08	-.7260407428E+09
.9570130951E+10			
T=144			
.2615700871E+04	-.4326476924E+06	.2735187604E+08	-.8542876824E+09
.1076625301E+11			
T=146			
.1565574323E+04	-.2825748479E+06	.1930780962E+08	-.6623263610E+09
.9065478910E+10			
T=148			
.1112743799E+04	-.2173463702E+06	.1576840531E+08	-.5762459083E+09
.8293616J79E+10			
T=150			
.8269702864E+03	-.1756949894E+06	.1348382326E+08	-.5200178370E+09
.7789424170E+10			
T=152			
.6188975595E+03	-.1434709869E+06	.1160647017E+08	-.4709792540E+09
.7325038662E+10			
T=154			
.5289768507E+03	-.1279574957E+06	.1059803351E+08	-.4415354652E+09
.7022584158E+10			
T=156			
		-.1080376663E+07	.2716635793E+08
.8743360053E+10	-.5055072584E+13	.1486616145E+16	-.2664591312E+18
.3154978307E+20	-.2563250316E+22	.1449822464E+24	-.5696829740E+25
.1524190939E+27	-.2647969445E+28	.2693111291E+29	-.1216960922E+30
T=158			
		-.1080117302E+07	.5268701417E+08
-.1058883857E+11	.2759906669E+13	-.4483029684E+15	.4857089840E+17
-.3577630541E+19	.1777591209E+21	-.5832117297E+22	.1209925318E+24
-.1439072883E+25	.7485989110E+25		
T=160			
		-.1054706897E+07	.3627311635E+08
-.1890592975E+10	.2610036040E+12	-.1096966887E+14	-.1023579420E+16
.1677098322E+18	-.1186660509E+20	.5205400074E+21	-.1402965357E+23
.2093301167E+24	-.1315026311E+25		
T=165			
		-.1024116979E+07	.3581886590E+08
-.1324241928E+10	.2289338337E+11	.3956536549E+14	-.7618361990E+16
.7108370186E+18	-.4021027775E+20	.1451606360E+22	-.3262043455E+23
.4144565067E+24	-.2267355942E+25		
T=170			
		-.1005218261E+07	.4825452662E+08
-.6850119223E+10	.1331290849E+13	-.1523843634E+15	.1082257802E+17
-.4914254130E+18	.1395601516E+20	-.2238957431E+21	.1539068797E+22
T=175			
		-.9732845193E+06	.4520261192E+08
-.5684977727E+10	.1079126629E+13	-.1215153647E+15	.8482227839E+16
-.3781796517E+18	.1058096800E+20	-.1679036013E+21	.1145416312E+22
T=180			
		-.9400353799E+06	.3945905338E+08
-.3342665457E+10	.5680615089E+12	-.5757585239E+14	.3561296615E+16
-.1400038640E+18	.3538278676E+19	-.5207081623E+20	.3355008091E+21
T=185			
		-.9038182729E+06	.3176803930E+08
-.8307965395E+09	.1160651154E+12	-.9646679901E+13	.3936350447E+15
-.6452078295E+16	.3645173359E+17		
T=190			
		-.8778584525E+06	.3201823518E+08
-.9231049270E+09	.1220463336E+12	-.9894494509E+13	.4165569753E+15
-.7446624303E+16	.5029915467E+17		
T=195			
		-.8522529551E+06	.3213256029E+08
-.1000466046E+10	.1282735705E+12	-.1011504369E+14	.4300258962E+15
-.7974360910E+16	.5726853686E+17		

TABLE II. PARAMETERS USED IN EQUATION(3), WITH P IN ATMOSPHERES, DENSITY IN MOL/CM^3.

T=200

		-.8303852338E+06	.3459629943E+08
-.1743192577E+10	.2289392965E+12	-.1766699163E+14	.7595168216E+15
-.1563554J01E+17	.1301663615E+18		

T=210

		-.7727867477E+06	.2779026825E+08
.9446750519E+08	-.2897334157E+11	.2176678141E+13	-.6829899862E+14
.2198768443E+16	-.2600660299E+17		

T=220

		-.7140604835E+06	.1785681640E+08
.3108773452E+10	-.4954163221E+12	.4188435284E+14	-.1928279756E+16
.4741891J07E+17	-.4718894082E+18		

T=230

		-.6909315816E+06	.3515480341E+08
-.2047185131E+10	.2657o20204E+12	-.1962522563E+14	.8612692615E+15
-.1891023676E+17	.1707983216E+18		

T=240

		-.6563610270E+06	.4353957840E+08
-.4930743439E+10	.7493725551E+12	-.6286771664E+14	.2990527217E+16
-.7300637035E+17	.7240325140E+18		

T=250

		-.5821220168E+06	.2094212657E+08
.1264533o03E+10	-.1159482577E+12	.5363577342E+13	-.6633726814E+14

T=260

		-.5477031930E+06	.2509523545E+08
.4428911J67E+09	-.3968335416E+11	.2306877646E+13	-.2024487781E+14

T=270

		-.5051116767E+06	.2398434792E+08
.7062752875E+09	-.6253868902E+11	.3402759717E+13	-.3922636005E+14

T=280

		-.4696633407E+06	.2699071029E+08
.7255496772E+08	.2502398601E+10	.5727701227E+12	.6705950909E+13

T=290

		-.4262187785E+06	.2483357625E+08
.5583114685E+09	-.4114772957E+11	.2570277193E+13	-.2702391675E+14

T=300

		-.4026871028E+06	.3220416723E+08
-.5953865635E+09	.4280200917E+11		

TABLE III. PARAMETERS USED IN EQUATION (4), WITH P IN ATMOSPHERES, T IN KELVINS.

.0065 MOL/CM^3			
.6176284459E+00	-.1187062036E+05	.1692560508E+09	-.1992706705E+13
.6622622812E+16			
.0070			
.6735903322E+00	-.1363226460E+05	.1900609241E+09	-.2106636911E+13
.5660938815E+16			
.0075			
.7312442020E+00	-.1553190713E+05	.2131182947E+09	-.2237628053E+13
.4704182640E+16			
.0080			
.7907767731E+00	-.1758299117E+05	.2391722317E+09	-.2403726306E+13
.3931107176E+16			
.0085			
.8512802910E+00	-.1960760397E+05	.2572974973E+09	-.2327134599E+13
.8681677936E+15			
.0090			
.9139540372E+00	-.2180718145E+05	.2803226756E+09	-.2347529772E+13
-.1292123434E+16			
.0095			
.9787632549E+00	-.2415283745E+05	.3063545999E+09	-.2416238562E+13
-.2966803432E+16			
.0100			
.1046077427E+01	-.2669611079E+05	.3390022499E+09	-.2639799518E+13
-.3038421143E+16			
.0105			
.1116129928E+01	-.2945868231E+05	.3797513246E+09	-.3062264899E+13
-.1041217863E+16			
.0110			
.1189423014E+01	-.3250301684E+05	.4323504711E+09	-.3781763430E+13
.3955145424E+16			
.0115			
.1266433086E+01	-.3589970622E+05	.5017299752E+09	-.4940893640E+13
.1338930938E+17			
.0120			
.1347181789E+01	-.3961941440E+05	.5857822502E+09	-.6481351452E+13
.2668635158E+17			
.0125			
.1432571214E+01	-.4379932298E+05	.6932605634E+09	-.8637932946E+13
.4606679358E+17			
.0130			
.1522295931E+01	-.4834745885E+05	.8179078166E+09	-.1123596935E+14
.6978490023E+17			
.0135			
.1616426961E+01	-.5324566228E+05	.9585998755E+09	-.1424632561E+14
.9752630883E+17			
.0140			
.1714903906E+01	-.5843913700E+05	.1111342651E+10	-.1755211795E+14
.1280585358E+18			
.0145			
.1816876927E+01	-.6373761327E+05	.1264059320E+10	-.2083268124E+14
.1582999193E+18			
.0150			
.1922096575E+01	-.6905352450E+05	.1410921775E+10	-.2392557947E+14
.1865921476E+18			
.0155			
.2030114540E+01	-.7426107929E+05	.1543807850E+10	-.2661208772E+14
.2107911408E+18			
.0160			
.2141357321E+01	-.7939732630E+05	.1665346981E+10	-.2896860356E+14
.2316263221E+18			
.0165			
.2255242308E+01	-.8430946733E+05	.1765913624E+10	-.3074089416E+14
.2466562951E+18			
.0170			
.2372644387E+01	-.8910741623E+05	.1852495307E+10	-.3211356126E+14
.2575816087E+18			
.0175			
.2493245482E+01	-.9368779156E+05	.1919169738E+10	-.3294356446E+14
.2631233236E+18			
.0180			
.2619169678E+01	-.9837892876E+05	.1986632805E+10	-.3377253386E+14
.2682907880E+18			
.0185			
.2749608119E+01	-.1029817302E+06	.2042855073E+10	-.3429505589E+14
.2703031932E+18			
.0190			
.2883455162E+01	-.1072564618E+06	.2074335690E+10	-.3419227179E+14
.2664633371E+18			

TABLE III. PARAMETERS USED IN EQUATION (4), WITH P IN ATMOSPHERES, T IN KELVINS.

.0195			
.3022821483E+01	-.1115145609E+06	.2100478136E+10	-.3396432149E+14
.2613521173E+18			
.0200			
.3167522663E+01	-.1156651246E+06	.2116354121E+10	-.3349111384E+14
.2538899208E+18			
.0205			
.3319205583E+01	-.1199338885E+06	.2136242190E+10	-.3314046835E+14
.2474324619E+18			
.0210			
.3477044513E+01	-.1241152355E+06	.2148681194E+10	-.3263671536E+14
.2396082269E+18			
.0215			
.3650270053E+01	-.1297102491E+06	.2241970294E+10	-.3411774928E+14
.2487253354E+18			
.0220			
.3816235789E+01	-.1328211478E+06	.2190274734E+10	-.3215321891E+14
.2285524396E+18			
.0225			
.3996462847E+01	-.1369634135E+06	.2196604129E+10	-.3159105933E+14
.2201158047E+18			
.0230			
.4193456563E+01	-.1422354289E+06	.2262083640E+10	-.3231436745E+14
.2215088826E+18			
.0235			
.4399117468E+01	-.1475099671E+06	.2320751742E+10	-.3287102116E+14
.2212407411E+18			
.0240			
.4589859566E+01	-.1494433542E+06	.2223845168E+10	-.3031461849E+14
.1982991153E+18			
.0245			
.4772760080E+01	-.1490627396E+06	.2023839312E+10	-.2581413484E+14
.1620202621E+18			
.0250			
.4966754124E+01	-.1488164279E+06	.1837225980E+10	-.2170764477E+14
.1293718091E+18			
.0255			
.5129437497E+01	-.1434210870E+06	.1433617623E+10	-.1370001516E+14
.7136255269E+17			
.0260			
.5370077407E+01	-.1458858694E+06	.1375139403E+10	-.1219783355E+14
.5805189435E+17			
.0265			
.5738985262E+01	-.1615496704E+06	.1866352302E+10	-.2049408517E+14
.1083105899E+18			
.0270			
.5981687876E+01	-.1613128673E+06	.1712257918E+10	-.1749945901E+14
.8665826030E+17			
.0275			
.6150566191E+01	-.1518736315E+06	.1219975321E+10	-.9140194147E+13
.3419029065E+17			
.0280			
.6266181707E+01	-.1358320819E+06	.5103503234E+09	.2252228803E+13
-.3310598738E+17			
.0285			
.6871335060E+01	-.1690569998E+06	.1675136529E+10	-.1710102961E+14
.8391894456E+17			
.0290			
.7378536177E+01	-.1872586811E+06	.2173994817E+10	-.2401852282E+14
.1181215671E+18			
.0295			
.7836266839E+01	-.1982546381E+06	.2411088586E+10	-.2679674598E+14
.1286487272E+18			
.0300			
.8140476217E+01	-.1940624176E+06	.2178156600E+10	-.2327692173E+14
.1086634303E+18			
.0305			
.8423751731E+01	-.1866226996E+06	.1865631166E+10	-.1887722277E+14
.8512408680E+17			
.0310			
.8368752737E+01	-.1484323189E+06	.6137051969E+09	-.2038297513E+13
.1702097229E+16			

TABLE III. PARAMETERS USED IN EQUATION (4), WITH P IN ATMOSPHERES, T IN KELVINS.

.0315			
.9004317322E+01	-.1626986069E+06	.8885973690E+09	-.4477933004E+13
.7982275787E+16			
.0320			
.1021852438E+02	-.2174302564E+06	.2276114517E+10	-.2032307867E+14
.7434944272E+17			
.0325			
.1117620447E+02	-.2532109709E+06	.3206203645E+10	-.3121713517E+14
.1206516311E+18			
.0330			
.1239370523E+02	-.3003514211E+06	.4319737841E+10	-.4289756707E+14
.1651326215E+18			
.0335			
.1286118699E+02	-.2966512428E+06	.4203295265E+10	-.4123146091E+14
.1552669672E+18			
.0340			
.1102347294E+02	-.1542310454E+06	.1095499690E+10	-.1164431562E+14
.5063649868E+17			
.0345			
.6487646380E+01	.1496878160E+06	-.5523968979E+10	.5127288129E+14
-.1698974030E+18			
.0350			
.6593178461E+01	.1755553444E+06	-.5990925532E+10	.5510987988E+14
-.1821056667E+18			
.0355			
.7782404985E+01	.1391541370E+06	-.5079605464E+10	.4585733581E+14
-.1489402921E+18			
.0360			
.8859467757E+01	.1111574520E+06	-.4338007170E+10	.3822130345E+14
-.1215437386E+18			
.0365			
.1209676345E+02	-.4809602078E+05	-.6884750415E+09	.3146422434E+13
.0370			
.1249791682E+02	-.4265576038E+05	-.6073234125E+09	.2352097880E+13

TABLE V_a. THERMODYNAMIC PROPERTIES OF OXYGEN ON THE SATURATION BOUNDARIES

TEMPERATURE	PRESSURE	VOLUME	ISOTHERM OERIVATIVE	ISOCHORE DERIVATIVE	INTERNAL ENERGY	ENTHALPY	ENTROPY	C_V	C_P	VELOCITY OF SOUND
K	BAR	CM^3/G	BAR-CM^3/G	BAR/K	J/G	J/G	J/G-K	J/G-K	J/G-K	M/S
54.359	.00146	.7652	8698.	39.721	-193.4	-193.4	2.097	1.087	1.665	1154.
54.359	.00146	96446.72	141.		35.0	49.1	6.558	.650	.910	141.
56.000	.00242	.7696	8494.	38.555	-190.7	-190.7	2.147	1.084	1.665	1142.
56.000	.00242	60229.20	145.		36.1	50.6	6.455	.650	.910	143.
58.000	.00427	.7750	8246.	37.228	-187.4	-187.4	2.205	1.079	1.664	1128.
58.000	.00427	35293.08	151.		37.4	52.4	6.339	.650	.911	145.
60.000	.00724	.7805	8000.	35.991	-184.0	-184.0	2.262	1.073	1.664	1114.
60.000	.00724	21510.62	156.		38.7	54.2	6.232	.650	.911	148.
62.000	.01185	.7860	7755.	34.827	-180.7	-180.7	2.316	1.065	1.664	1101.
62.000	.01185	13585.06	161.		40.0	56.0	6.134	.650	.911	150.
64.000	.01874	.7916	7512.	33.726	-177.4	-177.4	2.369	1.058	1.665	1087.
64.000	.01874	8860.28	166.		41.2	57.8	6.044	.651	.912	152.
66.000	.02876	.7973	7270.	32.678	-174.0	-174.0	2.420	1.049	1.665	1074.
66.000	.02876	5949.70	171.	.000	42.5	59.6	5.960	.651	.913	155.
68.000	.04294	.8030	7029.	31.676	-170.7	-170.7	2.470	1.040	1.666	1061.
68.000	.04294	4102.29	176.	.001	43.8	61.4	5.883	.651	.914	157.
70.000	.06253	.8089	6790.	30.714	-167.4	-167.4	2.518	1.031	1.667	1048.
70.000	.06253	2897.25	180.	.001	45.1	63.2	5.811	.651	.915	159.
72.000	.08898	.8149	6553.	29.785	-164.0	-164.0	2.565	1.021	1.668	1035.
72.000	.08898	2091.35	185.	.001	46.3	64.9	5.744	.652	.917	161.
74.000	.12401	.8210	6317.	28.886	-160.7	-160.7	2.611	1.011	1.670	1021.
74.000	.12401	1539.92	190.	.002	47.5	66.6	5.682	.652	.919	163.
76.000	.16954	.8272	6083.	28.014	-157.4	-157.4	2.656	1.001	1.672	1008.
76.000	.16954	1154.62	194.	.002	48.8	68.3	5.624	.653	.921	165.
78.000	.22775	.8336	5850.	27.164	-154.0	-154.0	2.699	.990	1.674	994.
78.000	.22775	880.16	198.	.003	50.0	70.0	5.570	.654	.925	167.
80.000	.30104	.8401	5620.	26.335	-150.7	-150.7	2.741	.980	1.676	981.
80.000	.30104	681.16	202.	.004	51.2	71.7	5.519	.655	.928	169.
82.000	.39205	.8468	5393.	25.523	-147.3	-147.3	2.783	.969	1.679	967.
82.000	.39205	534.50	206.	.005	52.3	73.3	5.472	.656	.933	171.
84.000	.50362	.8536	5167.	24.728	-144.0	-143.9	2.823	.958	1.682	953.
84.000	.50362	424.76	210.	.006	53.5	74.9	5.427	.658	.938	173.
86.000	.63881	.8607	4945.	23.947	-140.6	-140.5	2.863	.947	1.686	938.
86.000	.63881	341.50	213.	.008	54.6	76.4	5.385	.659	.943	175.
88.000	.80087	.8679	4725.	23.179	-137.2	-137.2	2.902	.937	1.691	923.
88.000	.80087	277.51	216.	.010	55.7	77.9	5.345	.661	.953	176.
90.000	.99321	.8754	4509.	22.423	-133.8	-133.8	2.940	.927	1.696	908.
90.000	.99321	227.73	218.	.012	56.8	79.4	5.307	.663	.958	178.
92.000	1.22	.8831	4296.	21.677	-130.5	-130.4	2.977	.916	1.701	893.
92.000	1.22	188.57	221.	.014	57.8	80.8	5.271	.666	.967	179.
94.000	1.48	.8911	4086.	20.941	-127.1	-126.9	3.013	.907	1.708	877.
94.000	1.48	157.45	223.	.017	58.8	82.1	5.237	.668	.977	180.
96.000	1.79	.8993	3880.	20.214	-123.7	-123.5	3.049	.897	1.715	861.
96.000	1.79	132.48	224.	.021	59.7	83.4	5.204	.672	.988	182.
98.000	2.14	.9078	3679.	19.496	-120.2	-120.0	3.085	.888	1.723	845.
98.000	2.14	112.25	226.	.024	60.7	84.7	5.173	.675	1.000	183.
100.000	2.54	.9166	3481.	18.786	-116.8	-116.6	3.119	.880	1.732	828.
100.000	2.54	95.74	226.	.029	61.5	85.8	5.143	.679	1.014	184.
102.000	2.99	.9257	3288.	18.085	-113.3	-113.1	3.154	.872	1.742	810.
102.000	2.99	82.14	227.	.034	62.4	87.0	5.114	.683	1.030	185.
104.000	3.51	.9352	3100.	17.392	-109.9	-109.5	3.187	.866	1.753	792.
104.000	3.51	70.87	227.	.040	63.1	88.0	5.086	.688	1.047	186.

TABLE Va. THERMODYNAMIC PROPERTIES OF OXYGEN ON THE SATURATION BOUNDARIES

TEMPERATURE	PRESSURE	VOLUME	ISOTHERM OERIVATIVE	ISOCHORE OERIVATIVE	INTERNAL ENERGY	ENTHALPY	ENTROPY	C_V	C_P	VELOCITY OF SOUND
K	BAR	CM^3/G	BAR-CM^3/G	BAR/K	J/G	J/G	J/G-K	J/G-K	J/G-K	M/S
106.000	4.08	.9451	2917.	16.708	-106.4	-106.0	3.220	.860	1.766	774.
106.000	4.08	61.46	226.	.046	63.9	89.0	5.059	.693	1.067	187.
108.000	4.72	.9553	2738.	16.033	-102.9	-102.4	3.253	.855	1.780	755.
108.000	4.72	53.55	225.	.053	64.6	89.8	5.033	.698	1.088	187.
110.000	5.43	.9660	2566.	15.369	-99.4	-98.8	3.286	.851	1.796	736.
110.000	5.43	46.86	224.	.061	65.2	90.6	5.008	.704	1.112	188.
112.000	6.22	.9771	2398.	14.716	-95.8	-95.2	3.318	.849	1.814	716.
112.000	6.22	41.17	221.	.071	65.7	91.3	4.983	.710	1.138	188.
114.000	7.09	.9888	2236.	14.076	-92.2	-91.5	3.350	.847	1.835	696.
114.000	7.09	36.30	219.	.081	66.2	92.0	4.959	.717	1.167	189.
116.000	8.04	1.0010	2080.	13.450	-88.6	-87.8	3.381	.847	1.857	676.
116.000	8.04	32.12	216.	.093	66.7	92.5	4.935	.724	1.200	189.
118.000	9.08	1.0138	1930.	12.842	-85.0	-84.0	3.412	.847	1.883	655.
118.000	9.08	28.50	212.	.106	67.0	92.9	4.912	.731	1.236	189.
120.000	10.22	1.0272	1785.	12.252	-81.3	-80.2	3.443	.848	1.912	635.
120.000	10.22	25.36	208.	.120	67.3	93.2	4.889	.740	1.277	189.
122.000	11.46	1.0414	1646.	11.685	-77.5	-76.3	3.474	.848	1.946	614.
122.000	11.46	22.62	203.	.137	67.5	93.4	4.866	.748	1.322	189.
124.000	12.80	1.0563	1512.	11.143	-73.8	-72.4	3.505	.847	1.984	595.
124.000	12.80	20.22	197.	.155	67.6	93.5	4.843	.757	1.374	189.
126.000	14.25	1.0722	1382.	10.631	-69.9	-68.4	3.536	.843	2.028	577.
126.000	14.25	18.11	191.	.175	67.7	93.5	4.821	.767	1.432	189.
128.000	15.81	1.0893	1257.	10.153	-66.0	-64.3	3.567	.833	2.079	560.
128.000	15.81	16.24	184.	.199	67.6	93.3	4.798	.777	1.499	189.
130.000	17.49	1.1078	1151.	9.723	-62.0	-60.1	3.598	.834	2.144	544.
130.000	17.49	14.59	177.	.224	67.4	92.9	4.775	.788	1.577	188.
132.000	19.30	1.1276	1024.	9.206	-57.9	-55.8	3.630	.825	2.215	524.
132.000	19.30	13.11	168.	.254	67.1	92.4	4.752	.799	1.668	187.
134.000	21.23	1.1496	900.	8.622	-53.7	-51.3	3.662	.822	2.295	500.
134.000	21.23	11.79	159.	.287	66.6	91.7	4.729	.812	1.775	187.
136.000	23.30	1.1736	776.	8.059	-49.5	-46.7	3.694	.822	2.390	475.
136.000	23.30	10.61	149.	.325	66.0	90.8	4.705	.825	1.906	186.
138.000	25.52	1.2001	663.	7.531	-45.0	-42.0	3.727	.823	2.523	451.
138.000	25.52	9.5400	138.	.368	65.2	89.6	4.680	.839	2.067	185.
140.000	27.88	1.2299	549.	6.970	-40.5	-37.0	3.760	.825	2.699	424.
140.000	27.88	8.5600	127.	.418	64.2	88.1	4.654	.854	2.271	183.
142.000	30.40	1.2636	449.	6.401	-35.7	-31.9	3.794	.832	2.933	396.
142.000	30.40	7.6700	114.	.477	63.0	86.3	4.626	.871	2.542	182.
144.000	33.08	1.3027	352.	5.842	-30.8	-26.5	3.830	.844	3.211	366.
144.000	33.08	6.8500	100.	.546	61.3	84.0	4.597	.889	2.917	181.
146.000	35.93	1.3490	268.	5.294	-25.5	-20.7	3.867	.860	3.639	337.
146.000	35.93	6.1900	84.	.631	59.3	81.2	4.565	.911	3.473	179.
148.000	38.96	1.4060	190.	4.739	-19.8	-14.3	3.908	.879	4.341	306.
148.000	38.96	5.3700	67.	.738	56.6	77.5	4.528	.937	4.414	177.
150.000	42.19	1.4805	120.	4.155	-13.4	-7.1	3.953	.906	5.629	273.
150.000	42.19	4.6600	47.	.883	52.8	72.5	4.483	.972	6.340	176.
152.000	45.63	1.5903	60.	3.508	-5.7	1.6	4.007	.949	8.820	236.
152.000	45.63	3.9400	26.	1.086	47.4	65.4	4.427	1.021	11.657	173.
154.000	49.30	1.8260	9.	2.655	6.1	15.1	4.091	1.052	43.470	188.
154.000	49.30	3.0600	5.	1.476	36.6	51.7	4.328	1.111	59.356	170.
154.581	50.43	2.2928		1.979	20.8	32.4	4.202			
154.561	50.43	2.2900		1.979	20.8	32.4	4.202			

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

1. BAR ISOBAR

	TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
*	54.370	.7652	8702.0	39.72	-193.41	-193.34	2.097	1.087	1.665	1154.
	56.	.7696	8498.9	38.56	-190.70	-190.62	2.147	1.084	1.664	1142.
	58.	.7750	8251.3	37.24	-187.37	-187.29	2.205	1.079	1.664	1128.
	60.	.7804	8005.3	36.00	-184.04	-183.97	2.261	1.073	1.664	1114.
	62.	.7859	7760.6	34.84	-180.72	-180.64	2.316	1.066	1.664	1101.
	64.	.7915	7517.4	33.73	-177.39	-177.31	2.369	1.059	1.665	1088.
	66.	.7972	7275.5	32.69	-174.06	-173.98	2.420	1.049	1.665	1075.
	68.	.8029	7034.9	31.69	-170.73	-170.65	2.470	1.040	1.666	1061.
	70.	.8088	6795.8	30.72	-167.40	-167.31	2.518	1.031	1.667	1048.
	72.	.8148	6558.2	29.79	-164.06	-163.98	2.565	1.021	1.668	1035.
	74.	.8209	6322.2	28.89	-160.72	-160.64	2.611	1.011	1.670	1022.
	76.	.8271	6087.9	28.02	-157.38	-157.30	2.655	1.001	1.671	1008.
	78.	.8335	5855.5	27.17	-154.04	-153.96	2.699	.990	1.673	995.
	80.	.8400	5625.0	26.34	-150.69	-150.61	2.741	.980	1.676	981.
	82.	.8467	5396.8	25.53	-147.33	-147.25	2.783	.969	1.679	967.
	84.	.8536	5170.9	24.73	-143.97	-143.89	2.823	.958	1.682	953.
	86.	.8606	4947.5	23.95	-140.61	-140.52	2.863	.948	1.686	938.
	88.	.8679	4726.7	23.18	-137.23	-137.14	2.902	.937	1.691	923.
	90.	.8754	4508.9	22.42	-133.84	-133.76	2.940	.927	1.696	908.
*	90.065	.8757	4501.9	22.40	-133.73	-133.65	2.941	.926	1.696	908.
*	90.065	226.3056	218.5	.012	56.79	79.42	5.306	.663	.958	178.
	92.	231.6547	224.2	.012	58.11	81.27	5.326	.662	.955	180.
	94.	237.1609	230.0	.011	59.46	83.18	5.347	.662	.952	182.
	96.	242.6466	235.8	.011	60.82	85.08	5.367	.661	.949	184.
	98.	248.1138	241.6	.011	62.17	86.98	5.386	.660	.946	186.
	100.	253.5642	247.3	.010	63.51	88.87	5.405	.659	.944	188.
	102.	258.9993	252.9	.010	64.85	90.75	5.424	.659	.942	190.
	104.	264.4204	258.6	.010	66.19	92.64	5.442	.658	.940	192.
	106.	269.8287	264.2	.010	67.53	94.51	5.460	.658	.938	194.
	108.	275.2252	269.8	.010	68.87	96.39	5.478	.657	.937	196.
	110.	280.6109	275.4	.009	70.20	98.26	5.495	.657	.935	198.
	112.	285.9867	281.0	.009	71.53	100.13	5.512	.657	.934	200.
	114.	291.3531	286.5	.009	72.86	102.00	5.528	.656	.933	202.
	116.	296.7110	292.0	.009	74.19	103.86	5.544	.656	.932	204.
	118.	302.0610	297.5	.009	75.52	105.72	5.560	.656	.930	205.
	120.	307.4035	303.0	.009	76.84	107.58	5.576	.655	.929	207.
	122.	312.7392	308.5	.008	78.17	109.44	5.591	.655	.928	209.
	124.	318.0684	313.9	.008	79.49	111.30	5.606	.655	.928	211.
	126.	323.3916	319.4	.008	80.81	113.15	5.621	.654	.927	213.
	128.	328.7092	324.8	.008	82.13	115.01	5.636	.654	.926	214.
	130.	334.0215	330.3	.008	83.45	116.86	5.650	.654	.925	216.
	132.	339.3289	335.7	.008	84.77	118.71	5.664	.654	.925	218.
	134.	344.6316	341.1	.008	86.09	120.56	5.678	.654	.924	220.
	136.	349.9300	346.5	.007	87.41	122.40	5.692	.654	.923	221.
	138.	355.2242	351.9	.007	88.73	124.25	5.705	.653	.923	223.
	140.	360.5145	357.3	.007	90.04	126.09	5.719	.653	.922	225.
	142.	365.8012	362.6	.007	91.36	127.94	5.732	.653	.922	226.
	144.	371.0844	368.0	.007	92.67	129.78	5.745	.653	.921	228.
	146.	376.3644	373.4	.007	93.99	131.62	5.757	.653	.921	229.
	148.	381.6412	378.7	.007	95.30	133.46	5.770	.653	.920	231.
	150.	386.9151	384.1	.007	96.61	135.31	5.782	.653	.920	233.
	152.	392.1862	389.4	.007	97.93	137.14	5.794	.652	.920	234.
	154.	397.4547	394.8	.007	99.24	138.98	5.806	.652	.919	236.
	156.	402.7207	400.1	.006	100.55	140.82	5.818	.652	.919	237.
	158.	407.9843	405.4	.006	101.86	142.66	5.830	.652	.919	239.
	160.	413.2456	410.7	.006	103.17	144.50	5.841	.652	.918	241.
	165.	426.3897	424.0	.006	106.45	149.09	5.870	.652	.918	244.
	170.	439.5213	437.3	.006	109.72	153.67	5.897	.652	.917	248.
	175.	452.6434	450.6	.006	112.99	158.26	5.924	.652	.916	252.
	180.	465.7553	463.8	.006	116.26	162.84	5.949	.652	.916	255.
	185.	478.8588	477.0	.005	119.53	167.42	5.975	.651	.916	259.
	190.	491.9546	490.2	.005	122.80	171.99	5.999	.651	.915	262.
	195.	505.0435	503.4	.005	126.07	176.57	6.023	.651	.915	266.
	200.	518.1261	516.6	.005	129.33	181.14	6.046	.651	.915	269.
	210.	544.2749	542.9	.005	135.86	190.29	6.090	.652	.914	276.
	220.	570.4047	569.2	.005	142.39	199.43	6.133	.652	.914	283.
	230.	596.5188	595.4	.004	148.93	208.58	6.174	.652	.914	289.
	240.	622.6195	621.6	.004	155.46	217.72	6.213	.653	.915	295.
	250.	648.7089	647.8	.004	162.00	226.87	6.250	.653	.915	301.
	260.	674.7886	674.0	.004	168.54	236.02	6.286	.654	.916	307.
	270.	700.8598	700.1	.004	175.10	245.18	6.320	.655	.916	313.
	280.	726.9238	726.3	.004	181.66	254.35	6.354	.656	.917	319.
	290.	752.9813	752.4	.003	188.23	263.53	6.386	.657	.918	324.
	300.	779.0333	778.5	.003	194.82	272.72	6.417	.659	.920	330.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

2. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 54.382	.7652	8705.7	39.72	-193.41	-193.25	2.098	1.088	1.665	1154.
56.	.7695	8504.1	38.57	-190.71	-190.56	2.146	1.084	1.664	1143.
58.	.7749	8256.6	37.25	-187.39	-187.23	2.205	1.079	1.664	1128.
60.	.7803	8010.7	36.01	-184.06	-183.90	2.261	1.073	1.664	1115.
62.	.7859	7766.1	34.84	-180.73	-180.58	2.316	1.066	1.664	1101.
64.	.7914	7523.0	33.74	-177.41	-177.25	2.369	1.058	1.665	1088.
66.	.7971	7281.2	32.70	-174.08	-173.92	2.420	1.049	1.665	1075.
68.	.8029	7040.8	31.69	-170.75	-170.59	2.470	1.040	1.666	1062.
70.	.8087	6801.8	30.73	-167.42	-167.25	2.518	1.031	1.667	1049.
72.	.8147	6564.3	29.80	-164.08	-163.92	2.565	1.021	1.668	1035.
74.	.8208	6328.4	28.90	-160.75	-160.58	2.610	1.011	1.669	1022.
76.	.8270	6094.2	28.03	-157.41	-157.24	2.655	1.001	1.671	1009.
78.	.8334	5861.9	27.18	-154.06	-153.90	2.698	.990	1.673	995.
80.	.8399	5631.6	26.35	-150.72	-150.55	2.741	.980	1.676	981.
82.	.8466	5403.5	25.54	-147.36	-147.19	2.782	.969	1.679	967.
84.	.8534	5177.7	24.74	-144.00	-143.83	2.823	.958	1.682	953.
86.	.8605	4954.4	23.96	-140.64	-140.46	2.862	.948	1.686	939.
88.	.8678	4733.8	23.19	-137.26	-137.09	2.901	.937	1.690	924.
90.	.8752	4516.1	22.43	-133.88	-133.70	2.939	.927	1.695	909.
92.	.8830	4301.4	21.69	-130.48	-130.31	2.977	.917	1.701	893.
94.	.8910	4090.0	20.95	-127.08	-126.90	3.013	.907	1.707	878.
96.	.8993	3881.9	20.22	-123.65	-123.47	3.049	.897	1.715	861.
* 97.238	.9045	3754.9	19.77	-121.53	-121.35	3.071	.892	1.720	851.
* 97.238	119.4735	225.2	.023	60.31	84.21	5.184	.674	.995	182.
98.	120.5760	227.6	.023	60.85	84.96	5.192	.673	.993	183.
100.	123.4543	233.9	.022	62.25	86.94	5.212	.671	.987	185.
102.	126.3135	240.2	.021	63.65	88.91	5.232	.670	.982	188.
104.	129.1555	246.4	.021	65.04	90.87	5.251	.668	.977	190.
106.	131.9821	252.5	.020	66.42	92.82	5.269	.667	.972	192.
108.	134.7947	258.5	.020	67.80	94.76	5.287	.666	.969	194.
110.	137.5946	264.6	.020	69.17	96.69	5.305	.665	.965	196.
112.	140.3828	270.5	.019	70.54	98.62	5.323	.664	.962	198.
114.	143.1604	276.4	.019	71.91	100.54	5.340	.663	.959	200.
116.	145.9283	282.3	.018	73.27	102.46	5.356	.662	.956	202.
118.	148.6872	288.2	.018	74.63	104.36	5.373	.662	.953	204.
120.	151.4378	294.0	.018	75.98	106.27	5.389	.661	.951	206.
122.	154.1808	299.7	.017	77.33	108.17	5.404	.660	.949	208.
124.	156.9167	305.5	.017	78.68	110.07	5.420	.660	.947	209.
126.	159.6460	311.2	.017	80.03	111.96	5.435	.659	.945	211.
128.	162.3692	316.9	.016	81.37	113.85	5.450	.659	.944	213.
130.	165.0867	322.6	.016	82.72	115.73	5.464	.658	.942	215.
132.	167.7989	328.2	.016	84.06	117.62	5.479	.658	.940	217.
134.	170.5061	333.9	.016	85.39	119.49	5.493	.658	.939	218.
136.	173.2086	339.5	.015	86.73	121.37	5.507	.657	.938	220.
138.	175.9068	345.1	.015	88.06	123.25	5.520	.657	.937	222.
140.	178.6008	350.7	.015	89.40	125.12	5.534	.657	.935	224.
142.	181.2910	356.2	.015	90.73	126.99	5.547	.656	.934	225.
144.	183.9775	361.8	.014	92.06	128.86	5.560	.656	.933	227.
146.	186.6606	367.3	.014	93.39	130.72	5.573	.656	.932	229.
148.	189.3404	372.8	.014	94.72	132.59	5.586	.656	.932	230.
150.	192.0172	378.3	.014	96.04	134.45	5.598	.655	.931	232.
152.	194.6911	383.8	.014	97.37	136.31	5.611	.655	.930	233.
154.	197.3622	389.3	.013	98.69	138.17	5.623	.655	.929	235.
156.	200.0308	394.8	.013	100.02	140.02	5.635	.655	.928	237.
158.	202.6968	400.3	.013	101.34	141.88	5.646	.654	.928	238.
160.	205.3606	405.7	.013	102.66	143.74	5.658	.654	.927	240.
165.	212.0104	419.3	.012	105.97	148.37	5.687	.654	.926	244.
170.	218.6479	432.9	.012	109.26	152.99	5.714	.654	.924	247.
175.	225.2746	446.4	.012	112.56	157.61	5.741	.653	.923	251.
180.	231.8915	459.9	.011	115.85	162.22	5.767	.653	.922	255.
185.	238.4997	473.3	.011	119.13	166.83	5.792	.653	.921	258.
190.	245.1001	486.7	.011	122.42	171.44	5.817	.653	.921	262.
195.	251.6935	500.1	.010	125.70	176.04	5.841	.653	.920	266.
200.	258.2805	513.4	.010	128.98	180.64	5.864	.652	.919	269.
210.	271.4378	540.1	.010	135.54	189.83	5.909	.652	.918	276.
220.	284.5761	566.7	.009	142.09	199.01	5.952	.652	.918	282.
230.	297.6983	593.2	.009	148.64	208.18	5.992	.653	.917	289.
240.	310.8072	619.6	.008	155.20	217.36	6.031	.653	.917	295.
250.	323.9046	646.0	.008	161.75	226.53	6.069	.654	.917	301.
260.	336.9922	672.4	.008	168.31	235.71	6.105	.654	.918	307.
270.	350.0713	698.7	.007	174.87	244.89	6.139	.655	.918	313.
280.	363.1431	725.0	.007	181.44	254.07	6.173	.656	.919	319.
290.	376.2085	751.3	.007	188.03	263.27	6.205	.657	.920	324.
300.	389.2683	777.5	.007	194.62	272.48	6.236	.659	.921	330.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

3. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 54.393	.7651	8709.3	39.72	-193.40	-193.17	2.098	1.088	1.665	1155.
56.	.7694	8509.3	38.58	-190.73	-190.50	2.146	1.084	1.664	1143.
58.	.7748	8261.9	37.26	-187.40	-187.17	2.204	1.079	1.664	1129.
60.	.7803	8016.0	36.02	-184.08	-183.84	2.261	1.073	1.664	1115.
62.	.7858	7771.6	34.85	-180.75	-180.51	2.315	1.066	1.664	1102.
64.	.7914	7528.6	33.75	-177.42	-177.19	2.368	1.058	1.664	1088.
66.	.7970	7286.9	32.71	-174.10	-173.86	2.420	1.049	1.665	1075.
68.	.8028	7046.6	31.70	-170.77	-170.53	2.469	1.040	1.666	1062.
70.	.8086	6807.7	30.74	-167.44	-167.19	2.518	1.031	1.666	1049.
72.	.8146	6570.3	29.81	-164.10	-163.86	2.564	1.021	1.668	1036.
74.	.8207	6334.5	28.91	-160.77	-160.52	2.610	1.011	1.669	1022.
76.	.8269	6100.5	28.04	-157.43	-157.18	2.655	1.001	1.671	1009.
78.	.8332	5868.3	27.19	-154.09	-153.84	2.698	.991	1.673	996.
80.	.8397	5638.1	26.36	-150.74	-150.49	2.741	.980	1.675	982.
82.	.8464	5410.2	25.55	-147.39	-147.14	2.782	.969	1.678	968.
84.	.8533	5184.5	24.76	-144.03	-143.76	2.822	.959	1.681	954.
86.	.8603	4961.4	23.97	-140.67	-140.41	2.862	.948	1.685	939.
88.	.8676	4740.9	23.20	-137.29	-137.03	2.901	.937	1.690	924.
90.	.8751	4523.3	22.45	-133.91	-133.65	2.939	.927	1.695	909.
92.	.8828	4308.8	21.70	-130.52	-130.25	2.976	.917	1.700	894.
94.	.8908	4097.5	20.96	-127.11	-126.85	3.013	.907	1.707	878.
96.	.8990	3889.6	20.23	-123.69	-123.43	3.049	.897	1.714	862.
98.	.9076	3685.3	19.51	-120.26	-119.99	3.084	.888	1.722	845.
100.	.9165	3484.7	18.79	-116.81	-116.54	3.119	.880	1.731	828.
102.	.9257	3288.1	18.09	-113.34	-113.06	3.154	.872	1.742	810.
* 102.026	.9259	3285.6	18.08	-113.23	-113.02	3.154	.872	1.742	810.
* 102.026	81.9819	226.7	.034	62.37	86.96	5.113	.683	1.030	185.
104.	83.9542	233.4	.033	63.80	88.99	5.133	.681	1.021	187.
106.	85.9343	240.1	.032	65.24	91.02	5.152	.678	1.013	189.
108.	87.8975	246.7	.031	66.67	93.04	5.171	.676	1.006	192.
110.	89.8456	253.3	.030	68.09	95.05	5.190	.674	.999	194.
112.	91.7802	259.7	.030	69.50	97.04	5.208	.673	.994	196.
114.	93.7024	266.0	.029	70.91	99.02	5.225	.671	.988	198.
116.	95.6135	272.3	.028	72.31	100.99	5.242	.670	.984	200.
118.	97.5145	278.5	.028	73.70	102.96	5.259	.669	.979	202.
120.	99.4062	284.7	.027	75.09	104.91	5.276	.668	.975	204.
122.	101.2894	290.8	.027	76.47	106.86	5.292	.667	.972	206.
124.	103.1647	296.8	.026	77.85	108.80	5.307	.666	.968	208.
126.	105.0328	302.9	.026	79.22	110.73	5.323	.665	.965	210.
128.	106.8942	308.8	.025	80.59	112.66	5.338	.664	.963	212.
130.	108.7495	314.8	.025	81.96	114.58	5.353	.663	.960	213.
132.	110.5990	320.7	.024	83.32	116.50	5.368	.662	.958	215.
134.	112.4431	326.5	.024	84.68	118.41	5.382	.662	.955	217.
136.	114.2823	332.4	.023	86.04	120.32	5.396	.661	.953	219.
138.	116.1168	338.2	.023	87.39	122.22	5.410	.661	.951	221.
140.	117.9469	344.0	.023	88.74	124.13	5.424	.660	.949	222.
142.	119.7729	349.7	.022	90.09	126.02	5.437	.660	.948	224.
144.	121.5951	355.5	.022	91.44	127.92	5.450	.659	.946	226.
146.	123.4137	361.2	.022	92.78	129.81	5.463	.659	.945	228.
148.	125.2290	366.9	.021	94.13	131.69	5.476	.658	.943	229.
150.	127.0410	372.5	.021	95.47	133.58	5.489	.658	.942	231.
152.	128.8499	378.2	.021	96.81	135.46	5.501	.658	.940	233.
154.	130.6561	383.8	.020	98.14	137.34	5.514	.657	.939	234.
156.	132.4595	389.5	.020	99.48	139.22	5.526	.657	.938	236.
158.	134.2604	395.1	.020	100.82	141.09	5.538	.657	.937	237.
160.	136.0588	400.7	.019	102.15	142.97	5.550	.656	.936	239.
165.	140.5452	414.6	.019	105.48	147.64	5.578	.656	.934	243.
170.	145.0189	428.4	.018	108.80	152.31	5.606	.655	.932	247.
175.	149.4814	442.2	.018	112.12	156.96	5.633	.655	.930	251.
180.	153.9340	455.9	.017	115.43	161.61	5.659	.654	.929	254.
185.	158.3777	469.6	.017	118.73	166.25	5.685	.654	.927	258.
190.	162.8135	483.2	.016	122.04	170.88	5.709	.654	.926	262.
195.	167.2421	496.8	.016	125.33	175.51	5.733	.654	.925	265.
200.	171.6643	510.3	.015	128.63	180.13	5.757	.653	.924	269.
210.	180.4917	537.3	.015	135.21	189.36	5.802	.653	.922	275.
220.	189.2997	564.2	.014	141.79	198.58	5.845	.653	.921	282.
230.	198.0917	590.9	.013	148.36	207.79	5.886	.653	.921	289.
240.	206.8701	617.6	.013	154.93	216.99	5.925	.654	.920	295.
250.	215.6369	644.2	.012	161.50	226.19	5.962	.654	.920	301.
260.	224.3940	670.8	.012	168.07	235.39	5.999	.655	.920	307.
270.	233.1425	697.3	.011	174.65	244.59	6.033	.655	.920	313.
280.	241.8836	723.8	.011	181.23	253.80	6.067	.656	.921	319.
290.	250.6183	750.2	.010	187.82	263.01	6.099	.658	.922	324.
300.	259.3474	776.6	.010	194.43	272.23	6.130	.659	.923	330.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

4. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 54.405	.7651	8713.0	39.72	-193.40	-193.09	2.098	1.088	1.665	1155.
56.	.7694	8514.5	38.59	-190.74	-190.44	2.146	1.085	1.664	1143.
58.	.7748	8267.2	37.26	-187.42	-187.11	2.204	1.079	1.664	1129.
60.	.7802	8021.4	36.03	-184.09	-183.78	2.261	1.073	1.664	1115.
62.	.7857	7777.1	34.86	-180.77	-180.45	2.315	1.066	1.664	1102.
64.	.7913	7534.2	33.76	-177.44	-177.12	2.368	1.058	1.664	1089.
66.	.7969	7292.6	32.71	-174.11	-173.80	2.419	1.050	1.665	1075.
68.	.8027	7052.4	31.71	-170.79	-170.47	2.469	1.041	1.665	1062.
70.	.8085	6813.6	30.75	-167.46	-167.13	2.517	1.031	1.666	1049.
72.	.8145	6576.4	29.82	-164.13	-163.80	2.564	1.021	1.667	1036.
74.	.8206	6340.7	28.92	-160.79	-160.46	2.610	1.011	1.669	1023.
76.	.8268	6106.8	28.05	-157.45	-157.12	2.654	1.001	1.671	1009.
78.	.8331	5874.7	27.20	-154.11	-153.78	2.698	.991	1.673	996.
80.	.8396	5644.7	26.37	-150.77	-150.43	2.740	.980	1.675	982.
82.	.8463	5416.8	25.56	-147.42	-147.08	2.782	.969	1.678	968.
84.	.8531	5191.3	24.77	-144.06	-143.72	2.822	.959	1.681	954.
86.	.8602	4968.3	23.98	-140.70	-140.35	2.862	.948	1.685	940.
88.	.8674	4748.0	23.22	-137.33	-136.98	2.900	.937	1.689	925.
90.	.8749	4530.5	22.46	-133.95	-133.60	2.938	.927	1.694	910.
92.	.8826	4316.2	21.71	-130.55	-130.20	2.976	.917	1.700	894.
94.	.8906	4105.0	20.97	-127.15	-126.80	3.012	.907	1.706	879.
96.	.8988	3897.3	20.24	-123.74	-123.38	3.048	.898	1.713	862.
98.	.9074	3693.1	19.52	-120.30	-119.94	3.084	.889	1.721	846.
100.	.9163	3492.7	18.81	-116.86	-116.49	3.119	.88	1.731	829.
102.	.9255	3296.3	18.10	-113.39	-113.02	3.153	.873	1.741	811.
104.	.9351	3104.0	17.40	-109.90	-109.52	3.187	.866	1.753	793.
* 105.735	.9437	2940.6	16.80	-106.85	-106.47	3.216	.861	1.764	776.
* 105.735	62.6166	226.2	.045	63.78	88.82	5.063	.692	1.064	187.
106.	62.8238	227.1	.045	63.97	89.10	5.065	.691	1.062	187.
108.	64.3737	234.3	.044	65.47	91.22	5.085	.683	1.050	189.
110.	65.9055	241.4	.042	66.94	93.31	5.104	.685	1.040	191.
112.	67.4212	248.4	.041	68.41	95.38	5.123	.683	1.031	194.
114.	68.9227	255.2	.040	69.86	97.43	5.141	.680	1.022	196.
116.	70.4114	262.0	.039	71.30	99.47	5.159	.678	1.015	198.
118.	71.8884	268.6	.038	72.74	101.49	5.176	.676	1.008	200.
120.	73.3550	275.1	.037	74.16	103.50	5.193	.675	1.002	202.
122.	74.8121	281.6	.037	75.58	105.50	5.209	.673	.997	204.
124.	76.2604	288.0	.036	76.99	107.49	5.226	.672	.992	206.
126.	77.7008	294.3	.035	78.39	109.47	5.241	.670	.987	208.
128.	79.1339	300.6	.034	79.79	111.44	5.257	.669	.983	210.
130.	80.5603	306.8	.034	81.18	113.40	5.272	.668	.979	212.
132.	81.9804	313.0	.033	82.57	115.36	5.287	.667	.976	214.
134.	83.3948	319.1	.032	83.95	117.31	5.302	.666	.973	216.
136.	84.8039	325.2	.032	85.33	119.25	5.316	.665	.970	218.
138.	86.2079	331.2	.031	86.70	121.18	5.330	.665	.967	219.
140.	87.6074	337.2	.031	88.07	123.11	5.344	.664	.964	221.
142.	89.0025	343.2	.030	89.44	125.04	5.358	.663	.962	223.
144.	90.3935	349.1	.030	90.80	126.96	5.371	.663	.959	225.
146.	91.7808	355.0	.029	92.17	128.88	5.384	.662	.957	227.
148.	93.1645	360.9	.029	93.52	130.79	5.397	.661	.955	228.
150.	94.5449	366.7	.028	94.88	132.70	5.410	.661	.953	230.
152.	95.9221	372.5	.028	96.23	134.60	5.423	.660	.952	232.
154.	97.2963	378.3	.027	97.59	136.50	5.435	.660	.950	233.
156.	98.6678	384.1	.027	98.94	138.40	5.448	.660	.948	235.
158.	100.0365	389.8	.027	100.28	140.30	5.460	.659	.947	237.
160.	101.4028	395.6	.026	101.63	142.19	5.472	.659	.945	238.
165.	104.8084	409.8	.025	104.99	146.91	5.501	.658	.942	242.
170.	108.2010	424.0	.025	108.33	151.61	5.529	.657	.940	246.
175.	111.5822	438.0	.024	111.67	156.31	5.556	.656	.937	250.
180.	114.9531	452.0	.023	115.00	160.99	5.582	.656	.935	254.
185.	118.3150	465.9	.022	118.33	165.66	5.608	.655	.933	258.
190.	121.6688	479.7	.022	121.65	170.32	5.633	.655	.931	261.
195.	125.0154	493.5	.021	124.96	174.97	5.657	.655	.930	265.
200.	128.3554	507.2	.021	128.28	179.62	5.680	.654	.929	268.
210.	135.0182	534.5	.020	134.89	188.89	5.726	.654	.926	275.
220.	141.6615	561.7	.019	141.48	198.15	5.769	.654	.925	282.
230.	148.2885	588.7	.018	148.08	207.39	5.810	.654	.924	288.
240.	154.9018	615.6	.017	154.66	216.62	5.849	.654	.923	295.
250.	161.5035	642.5	.016	161.25	225.85	5.887	.654	.922	301.
260.	168.0953	669.2	.016	167.83	235.07	5.923	.655	.922	307.
270.	174.6786	695.9	.015	174.42	244.29	5.958	.656	.922	313.
280.	181.2544	722.5	.014	181.02	253.52	5.991	.657	.923	319.
290.	187.8238	749.1	.014	187.62	262.75	6.024	.658	.923	324.
300.	194.3875	775.6	.013	194.23	271.99	6.055	.659	.924	330.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

5. BAR ISOBAR

	TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
*	54.416	.7651	8716.7	39.72	-193.39	-193.01	2.098	1.088	1.665	1155.
	56.	.7693	8519.7	38.60	-190.76	-190.38	2.146	1.085	1.664	1143.
	58.	.7747	8272.5	37.27	-187.43	-187.05	2.204	1.079	1.664	1129.
	60.	.7801	8026.8	36.04	-184.11	-183.72	2.260	1.073	1.664	1116.
	62.	.7856	7782.6	34.87	-180.78	-180.39	2.315	1.066	1.664	1102.
	64.	.7912	7539.8	33.77	-177.46	-177.06	2.368	1.058	1.664	1089.
	66.	.7968	7298.3	32.72	-174.13	-173.73	2.419	1.05	1.665	1076.
	68.	.8026	7058.2	31.72	-170.81	-170.41	2.469	1.041	1.665	1063.
	70.	.8084	6819.6	30.76	-167.48	-167.07	2.517	1.031	1.666	1050.
	72.	.8144	6582.4	29.83	-164.15	-163.74	2.564	1.022	1.667	1036.
	74.	.8204	6346.9	28.93	-160.81	-160.40	2.610	1.012	1.669	1023.
	76.	.8266	6113.1	28.06	-157.48	-157.07	2.654	1.001	1.670	1010.
	78.	.8330	5881.1	27.21	-154.14	-153.72	2.698	.991	1.672	996.
	80.	.8395	5651.2	26.38	-150.79	-150.37	2.740	.980	1.675	983.
	82.	.8462	5423.5	25.57	-147.45	-147.02	2.781	.970	1.677	969.
	84.	.8530	5198.1	24.78	-144.09	-143.66	2.822	.959	1.681	955.
	86.	.8600	4975.2	24.00	-140.73	-140.30	2.861	.948	1.684	940.
	88.	.8673	4755.1	23.23	-137.36	-136.92	2.900	.938	1.689	925.
	90.	.8747	4537.8	22.47	-133.98	-133.54	2.938	.927	1.693	910.
	92.	.8824	4323.5	21.72	-130.59	-130.15	2.975	.917	1.699	895.
	94.	.8904	4112.5	20.99	-127.19	-126.74	3.012	.907	1.705	879.
	96.	.8986	3904.9	20.26	-123.78	-123.33	3.048	.898	1.712	863.
	98.	.9072	3700.9	19.54	-120.35	-119.89	3.083	.889	1.721	846.
	100.	.9160	3500.7	18.82	-116.90	-116.44	3.118	.881	1.730	829.
	102.	.9252	3304.4	18.12	-113.44	-112.97	3.153	.873	1.740	812.
	104.	.9348	3112.3	17.42	-109.95	-109.48	3.186	.866	1.752	793.
	106.	.9448	2924.4	16.72	-106.44	-105.96	3.220	.860	1.765	775.
	108.	.9552	2740.8	16.04	-102.90	-102.42	3.253	.855	1.780	755.
*	108.808	.9596	2667.9	15.76	-101.46	-100.98	3.266	.853	1.787	747.
*	108.808	50.7134	224.5	.056	64.80	90.16	5.023	.700	1.097	188.
	110.	51.4807	229.0	.055	65.72	91.46	5.035	.698	1.088	189.
	112.	52.7533	236.6	.054	67.25	93.63	5.054	.69-	1.074	191.
	114.	54.0091	244.0	.052	68.76	95.76	5.073	.691	1.062	194.
	116.	55.2499	251.2	.051	70.25	97.87	5.091	.688	1.051	196.
	118.	56.4775	258.3	.049	71.73	99.97	5.109	.685	1.041	198.
	120.	57.6931	265.3	.048	73.19	102.04	5.127	.683	1.033	200.
	122.	58.8980	272.2	.047	74.65	104.10	5.144	.680	1.025	202.
	124.	60.0933	278.9	.046	76.09	106.14	5.160	.678	1.018	205.
	126.	61.2797	285.6	.045	77.53	108.17	5.176	.677	1.011	207.
	128.	62.4581	292.2	.044	78.96	110.19	5.192	.675	1.006	209.
	130.	63.6292	298.7	.043	80.38	112.19	5.208	.674	1.000	211.
	132.	64.7935	305.1	.042	81.79	114.19	5.223	.672	.996	213.
	134.	65.9516	311.5	.041	83.20	116.17	5.238	.671	.991	215.
	136.	67.1039	317.9	.041	84.60	118.15	5.253	.670	.987	216.
	138.	68.2510	324.1	.040	86.00	120.12	5.267	.669	.983	218.
	140.	69.3931	330.3	.039	87.39	122.09	5.281	.668	.980	220.
	142.	70.5306	336.5	.038	88.78	124.04	5.295	.667	.976	222.
	144.	71.6638	342.6	.038	90.16	125.99	5.309	.666	.973	224.
	146.	72.7931	348.7	.037	91.54	127.93	5.322	.665	.971	226.
	148.	73.9186	354.8	.036	92.91	129.87	5.335	.664	.968	227.
	150.	75.0406	360.8	.036	94.29	131.81	5.348	.664	.965	229.
	152.	76.1593	366.8	.035	95.66	133.73	5.361	.663	.963	231.
	154.	77.2749	372.7	.035	97.02	135.66	5.374	.663	.961	233.
	156.	78.3876	378.7	.034	98.38	137.58	5.386	.662	.959	234.
	158.	79.4976	384.6	.034	99.75	139.49	5.398	.661	.957	236.
	160.	80.6050	390.4	.033	101.10	141.41	5.410	.661	.955	238.
	165.	83.3630	405.0	.032	104.49	146.17	5.440	.660	.951	242.
	170.	86.1076	419.5	.031	107.86	150.92	5.468	.659	.947	246.
	175.	88.8404	433.8	.030	111.23	155.65	5.495	.658	.944	249.
	180.	91.5628	448.0	.029	114.58	160.36	5.522	.657	.942	253.
	185.	94.2760	462.1	.028	117.92	165.06	5.548	.657	.939	257.
	190.	96.9810	476.2	.027	121.26	169.75	5.573	.656	.937	261.
	195.	99.6785	490.2	.027	124.59	174.43	5.597	.656	.935	264.
	200.	102.3695	504.1	.026	127.92	179.10	5.621	.655	.933	268.
	210.	107.7339	531.7	.025	134.56	188.42	5.666	.655	.931	275.
	220.	113.0785	559.2	.023	141.18	197.72	5.709	.655	.928	282.
	230.	118.4067	586.5	.022	147.79	206.99	5.751	.654	.927	288.
	240.	123.7211	613.6	.021	154.40	216.26	5.790	.655	.926	295.
	250.	129.0238	640.7	.020	161.00	225.51	5.828	.655	.925	301.
	260.	134.3165	667.6	.020	167.60	234.75	5.864	.655	.924	307.
	270.	139.6006	694.5	.019	174.20	244.00	5.899	.656	.924	313.
	280.	144.8773	721.3	.018	180.80	253.24	5.933	.657	.925	319.
	290.	150.1475	748.0	.017	187.41	262.49	5.965	.658	.925	324.
	300.	155.4121	774.6	.017	194.04	271.74	5.996	.659	.926	330.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

6. BAR ISOBAR

TEMPERATURE K	VOLUME CM3/G	ISOTHERM DERIVATIVE BAR-CM3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	Cv J/G-K	Cp J/G-K	VELOCITY OF SOUND M/S
* 54.428	.7650	8720.3	39.72	-193.39	-192.93	2.098	1.088	1.665	1155.
56.	.7692	8524.8	38.61	-190.77	-190.31	2.145	1.085	1.664	1144.
58.	.7746	8277.7	37.28	-187.45	-186.99	2.204	1.080	1.664	1130.
60.	.7800	8032.2	36.04	-184.13	-183.66	2.260	1.073	1.664	1116.
62.	.7855	7788.1	34.88	-180.80	-180.33	2.315	1.066	1.664	1102.
64.	.7911	7545.4	33.78	-177.48	-177.00	2.367	1.058	1.664	1089.
66.	.7967	7304.1	32.73	-174.15	-173.67	2.419	1.05	1.664	1076.
68.	.8025	7064.1	31.73	-170.83	-170.34	2.468	1.041	1.665	1063.
70.	.8083	6825.5	30.77	-167.50	-167.01	2.517	1.031	1.666	1050.
72.	.8143	6588.5	29.84	-164.17	-163.68	2.564	1.022	1.667	1037.
74.	.8203	6353.0	28.94	-160.84	-160.34	2.609	1.012	1.668	1024.
76.	.8265	6119.4	28.07	-157.50	-157.01	2.654	1.001	1.670	1010.
78.	.8329	5887.5	27.22	-154.16	-153.66	2.697	.991	1.672	997.
80.	.8394	5657.8	26.39	-150.82	-150.32	2.740	.980	1.674	983.
82.	.8460	5430.2	25.58	-147.47	-146.97	2.781	.970	1.677	969.
84.	.8529	5204.9	24.79	-144.12	-143.61	2.821	.959	1.680	955.
86.	.8599	4982.2	24.01	-140.76	-140.24	2.861	.948	1.684	941.
88.	.8671	4762.1	23.24	-137.39	-136.87	2.900	.938	1.688	926.
90.	.8746	4545.0	22.48	-134.01	-133.49	2.938	.927	1.693	911.
92.	.8823	4330.9	21.74	-130.63	-130.10	2.975	.917	1.698	896.
94.	.8902	4120.0	21.00	-127.23	-126.69	3.012	.907	1.705	880.
96.	.8984	3912.6	20.27	-123.82	-123.28	3.048	.898	1.712	864.
98.	.9069	3708.7	19.55	-120.39	-119.84	3.083	.889	1.720	847.
100.	.9158	3508.7	18.84	-116.95	-116.40	3.118	.881	1.729	830.
102.	.9250	3312.6	18.13	-113.48	-112.93	3.152	.873	1.739	812.
104.	.9345	3120.6	17.43	-110.00	-109.44	3.186	.866	1.751	794.
106.	.9445	2932.8	16.74	-106.49	-105.92	3.219	.860	1.764	775.
108.	.9549	2749.5	16.06	-102.95	-102.38	3.253	.855	1.779	756.
110.	.9658	2570.6	15.38	-99.39	-98.81	3.285	.851	1.796	736.
* 111.453	.9741	2443.0	14.89	-96.76	-96.18	3.309	.849	1.809	721.
* 111.458	42.6230	222.1	.068	65.58	91.16	4.989	.703	1.131	188.
112.	42.9240	224.2	.067	66.01	91.77	4.995	.707	1.125	189.
114.	44.0230	232.2	.065	67.59	94.00	5.015	.702	1.108	191.
116.	45.1045	240.0	.063	69.14	96.20	5.034	.698	1.092	194.
118.	46.1706	247.7	.062	70.67	98.37	5.052	.694	1.079	196.
120.	47.2230	255.1	.060	72.18	100.52	5.070	.691	1.067	198.
122.	48.2633	262.4	.058	73.68	102.64	5.088	.688	1.056	201.
124.	49.2928	269.6	.057	75.17	104.74	5.105	.686	1.047	203.
126.	50.3124	276.7	.055	76.64	106.83	5.122	.683	1.038	205.
128.	51.3232	283.6	.054	78.10	108.90	5.138	.681	1.030	207.
130.	52.3260	290.4	.053	79.55	110.95	5.154	.679	1.023	209.
132.	53.3214	297.2	.052	81.00	112.99	5.170	.677	1.017	211.
134.	54.3101	303.8	.051	82.43	115.02	5.185	.676	1.011	213.
136.	55.2926	310.4	.050	83.86	117.03	5.200	.674	1.006	215.
138.	56.2694	316.9	.049	85.28	119.04	5.214	.673	1.001	217.
140.	57.2409	323.4	.048	86.69	121.04	5.229	.672	.996	219.
142.	58.2076	329.8	.047	88.10	123.02	5.243	.671	.992	221.
144.	59.1697	336.1	.046	89.50	125.00	5.257	.670	.988	223.
146.	60.1277	342.4	.045	90.90	126.98	5.270	.669	.984	225.
148.	61.0817	348.7	.044	92.29	128.94	5.284	.668	.981	226.
150.	62.0320	354.9	.044	93.68	130.90	5.297	.667	.978	228.
152.	62.9789	361.0	.043	95.07	132.85	5.310	.666	.975	230.
154.	63.9226	367.1	.042	96.45	134.80	5.322	.665	.972	232.
156.	64.8632	373.2	.042	97.83	136.74	5.335	.665	.970	233.
158.	65.8010	379.3	.041	99.20	138.68	5.347	.664	.967	235.
160.	66.7361	385.3	.040	100.57	140.61	5.359	.663	.965	237.
165.	69.0631	400.2	.039	103.99	145.43	5.389	.662	.960	241.
170.	71.3763	415.0	.038	107.39	150.21	5.418	.661	.956	245.
175.	73.6774	429.6	.036	110.78	154.98	5.445	.660	.952	249.
180.	75.9678	444.0	.035	114.15	159.73	5.472	.659	.948	253.
185.	78.2489	458.4	.034	117.52	164.47	5.498	.658	.945	257.
190.	80.5215	472.7	.033	120.87	169.18	5.523	.657	.943	260.
195.	82.7866	486.9	.032	124.22	173.89	5.548	.657	.940	264.
200.	85.0450	501.0	.031	127.56	178.59	5.571	.656	.938	268.
210.	89.5441	529.0	.030	134.23	187.95	5.617	.656	.935	275.
220.	94.0232	556.7	.028	140.87	197.29	5.661	.655	.932	281.
230.	98.4856	584.3	.027	147.51	206.60	5.702	.655	.930	288.
240.	102.9342	611.7	.026	154.13	215.89	5.741	.655	.928	294.
250.	107.3709	638.9	.025	160.74	225.17	5.779	.655	.927	301.
260.	111.7976	666.0	.024	167.36	234.44	5.816	.656	.927	307.
270.	116.2157	693.1	.023	173.97	243.70	5.851	.656	.926	313.
280.	120.6263	720.0	.022	180.59	252.96	5.884	.657	.926	319.
290.	125.0304	746.9	.021	187.21	262.23	5.917	.658	.927	324.
300.	129.4288	773.7	.020	193.84	271.50	5.948	.660	.927	330.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

7. BAR ISOBAR

	TEMPERATURE K	VOLUME CM^3/G	ISOTHERM OERIVATIVE BAR-CM^3/G	ISOCHORE OERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_p J/G-K	VELOCITY OF SOUNO M/S
*	54.439	.7650	8724.0	39.72	-193.38	-192.85	2.098	1.088	1.664	1155.
	56.	.7692	8530.0	38.62	-190.79	-190.25	2.145	1.085	1.664	1144.
	58.	.7745	8283.0	37.29	-187.47	-186.92	2.203	1.080	1.664	1130.
	60.	.7800	8037.6	36.05	-184.14	-183.60	2.260	1.073	1.664	1116.
	62.	.7855	7793.6	34.89	-180.82	-180.27	2.314	1.066	1.664	1103.
	64.	.7910	7551.0	33.79	-177.50	-176.94	2.367	1.058	1.664	1090.
	66.	.7967	7309.8	32.74	-174.17	-173.61	2.418	1.050	1.664	1076.
	68.	.8024	7069.9	31.74	-170.85	-170.28	2.468	1.041	1.665	1063.
	70.	.8082	6831.4	30.78	-167.52	-166.95	2.516	1.032	1.666	1050.
	72.	.8142	6594.5	29.85	-164.19	-163.62	2.563	1.022	1.667	1037.
	74.	.8202	6359.2	28.95	-160.86	-160.29	2.609	1.012	1.668	1024.
	76.	.8264	6125.6	28.08	-157.53	-156.95	2.653	1.002	1.670	1011.
	78.	.8328	5893.9	27.23	-154.19	-153.61	2.697	.991	1.672	997.
	80.	.8392	5664.3	26.40	-150.85	-150.26	2.739	.980	1.674	983.
	82.	.8459	5436.8	25.59	-147.50	-146.91	2.781	.970	1.677	970.
	84.	.8527	5211.7	24.80	-144.15	-143.55	2.821	.959	1.680	955.
	86.	.8597	4989.1	24.02	-140.79	-140.19	2.861	.948	1.693	941.
	88.	.8670	4769.2	23.25	-137.42	-136.82	2.899	.938	1.688	926.
	90.	.8744	4552.2	22.49	-134.05	-133.44	2.937	.928	1.692	911.
	92.	.8821	4338.2	21.75	-130.66	-130.04	2.975	.917	1.698	896.
	94.	.8900	4127.5	21.01	-127.27	-126.64	3.011	.908	1.704	880.
	96.	.8982	3920.2	20.28	-123.86	-123.23	3.047	.898	1.711	864.
	98.	.9067	3716.5	19.56	-120.43	-119.80	3.083	.889	1.719	848.
	100.	.9155	3516.6	18.85	-116.99	-116.35	3.117	.881	1.728	831.
	102.	.9247	3320.7	18.15	-113.53	-112.88	3.152	.873	1.738	813.
	104.	.9342	3128.9	17.45	-110.05	-109.40	3.186	.866	1.750	795.
	106.	.9442	2941.3	16.76	-106.54	-105.88	3.219	.861	1.763	776.
	108.	.9546	2758.1	16.07	-103.01	-102.34	3.252	.856	1.777	757.
	110.	.9654	2579.4	15.40	-99.45	-98.77	3.285	.852	1.794	737.
	112.	.9768	2405.2	14.73	-95.85	-95.17	3.317	.843	1.813	717.
*	113.803	.9876	2252.2	14.14	-92.57	-91.88	3.346	.847	1.833	698.
*	113.803	36.7497	219.2	.080	66.18	91.91	4.961	.716	1.164	189.
	114.	36.8469	219.9	.080	66.34	92.14	4.963	.715	1.162	189.
	116.	37.8207	228.4	.077	67.96	94.44	4.983	.710	1.141	192.
	118.	38.7766	236.6	.075	69.56	96.70	5.002	.705	1.122	194.
	120.	39.7167	244.6	.072	71.13	98.93	5.021	.701	1.106	196.
	122.	40.6430	252.4	.070	72.67	101.12	5.039	.697	1.091	199.
	124.	41.5570	260.0	.068	74.20	103.29	5.057	.694	1.079	201.
	126.	42.4601	267.5	.067	75.72	105.44	5.074	.691	1.067	203.
	128.	43.3533	274.8	.065	77.22	107.56	5.091	.688	1.057	206.
	130.	44.2377	282.0	.063	78.70	109.67	5.107	.685	1.048	208.
	132.	45.1140	289.0	.062	80.18	111.76	5.123	.683	1.040	210.
	134.	45.9831	296.0	.061	81.64	113.83	5.139	.681	1.032	212.
	136.	46.8455	302.9	.059	83.10	115.89	5.154	.679	1.026	214.
	138.	47.7017	309.6	.058	84.54	117.93	5.169	.678	1.019	216.
	140.	48.5524	316.4	.057	85.98	119.97	5.183	.676	1.014	218.
	142.	49.3978	323.0	.056	87.41	121.99	5.198	.675	1.009	220.
	144.	50.2385	329.5	.055	88.83	124.00	5.212	.673	1.004	222.
	146.	51.0747	336.0	.054	90.25	126.00	5.226	.672	.999	224.
	148.	51.9068	342.5	.053	91.66	128.00	5.239	.671	.995	225.
	150.	52.7350	348.9	.052	93.07	129.98	5.253	.670	.991	227.
	152.	53.5597	355.2	.051	94.47	131.96	5.266	.669	.988	229.
	154.	54.3809	361.5	.050	95.87	133.93	5.279	.668	.984	231.
	156.	55.1991	367.7	.049	97.26	135.90	5.291	.667	.981	233.
	158.	56.0142	373.9	.048	98.65	137.86	5.304	.666	.978	234.
	160.	56.8266	380.1	.048	100.03	139.81	5.316	.666	.975	236.
	165.	58.8463	395.4	.046	103.48	144.67	5.346	.664	.969	240.
	170.	60.8519	410.4	.044	106.91	149.51	5.375	.663	.964	244.
	175.	62.8450	425.3	.043	110.32	154.31	5.403	.661	.959	248.
	180.	64.8273	440.1	.041	113.72	159.10	5.430	.660	.955	252.
	185.	66.7999	454.7	.040	117.10	163.86	5.456	.659	.952	256.
	190.	68.7640	469.2	.039	120.48	168.61	5.481	.659	.948	260.
	195.	70.7204	483.6	.038	123.85	173.35	5.506	.658	.946	264.
	200.	72.6700	497.9	.037	127.20	178.07	5.530	.657	.943	267.
	210.	76.5512	526.2	.035	133.90	187.48	5.576	.657	.939	274.
	220.	80.4122	554.2	.033	140.57	196.85	5.619	.656	.936	281.
	230.	84.2564	582.1	.031	147.22	206.20	5.661	.656	.933	288.
	240.	88.0865	609.7	.030	153.86	215.52	5.700	.656	.931	294.
	250.	91.9048	637.2	.029	160.49	224.82	5.738	.656	.930	301.
	260.	95.7130	664.5	.028	167.12	234.12	5.775	.656	.929	307.
	270.	99.5125	691.7	.027	173.75	243.40	5.810	.657	.928	313.
	280.	103.3045	718.8	.026	180.37	252.69	5.844	.657	.928	319.
	290.	107.0900	745.8	.025	187.01	261.97	5.876	.658	.928	324.
	300.	110.8697	772.7	.024	193.64	271.25	5.908	.660	.929	330.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

8. BAR ISOBAR

TEMPERATURE K	VOLUME CM3/G	ISOTHERM DERIVATIVE BAR-CM3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 54.451	.7650	8727.6	39.73	-193.38	-192.77	2.098	1.088	1.664	1155.
56.	.7691	8535.2	38.63	-190.80	-190.19	2.145	1.085	1.664	1144.
58.	.7745	8288.3	37.30	-187.48	-186.86	2.203	1.080	1.664	1130.
60.	.7799	8043.0	36.06	-184.16	-183.53	2.260	1.074	1.664	1116.
62.	.7854	7799.1	34.90	-180.84	-180.21	2.314	1.066	1.664	1103.
64.	.7909	7556.6	33.80	-177.51	-176.88	2.367	1.059	1.664	1090.
66.	.7966	7315.5	32.75	-174.19	-173.55	2.418	1.050	1.664	1077.
68.	.8023	7075.7	31.75	-170.87	-170.22	2.468	1.041	1.665	1064.
70.	.8081	6837.4	30.79	-167.54	-166.89	2.516	1.032	1.665	1051.
72.	.8141	6600.6	29.86	-164.21	-163.56	2.563	1.022	1.667	1037.
74.	.8201	6365.4	28.96	-160.88	-160.23	2.609	1.012	1.668	1024.
76.	.8263	6131.9	28.09	-157.55	-156.89	2.653	1.002	1.669	1011.
78.	.8326	5900.3	27.24	-154.21	-153.55	2.697	.991	1.671	997.
80.	.8391	5670.8	26.41	-150.87	-150.20	2.739	.981	1.674	984.
82.	.8458	5443.5	25.60	-147.53	-146.85	2.780	.970	1.676	970.
84.	.8526	5218.5	24.81	-144.18	-143.50	2.821	.959	1.679	956.
86.	.8596	4996.0	24.03	-140.82	-140.13	2.860	.949	1.683	941.
88.	.8668	4776.2	23.26	-137.45	-136.76	2.899	.938	1.687	927.
90.	.8742	4559.3	22.51	-134.08	-133.38	2.937	.928	1.692	912.
92.	.8819	4345.5	21.76	-130.70	-129.99	2.974	.918	1.697	897.
94.	.8898	4135.0	21.02	-127.30	-126.59	3.011	.908	1.703	881.
96.	.8980	3927.8	20.30	-123.90	-123.18	3.047	.898	1.710	865.
98.	.9065	3724.3	19.58	-120.47	-119.75	3.082	.889	1.718	848.
100.	.9153	3524.6	18.87	-117.03	-116.30	3.117	.88	1.727	831.
102.	.9244	3328.8	18.16	-113.58	-112.84	3.151	.873	1.737	814.
104.	.9340	3137.1	17.46	-110.10	-109.35	3.185	.867	1.749	796.
106.	.9439	2949.7	16.77	-106.60	-105.84	3.218	.861	1.761	777.
108.	.9542	2766.7	16.09	-103.07	-102.31	3.252	.856	1.776	758.
110.	.9651	2588.2	15.42	-99.51	-98.74	3.284	.852	1.793	738.
112.	.9764	2414.2	14.75	-95.91	-95.13	3.317	.849	1.811	718.
114.	.9884	2244.8	14.09	-92.28	-91.49	3.349	.847	1.833	697.
* 115.915	1.0005	2086.9	13.48	-88.76	-87.96	3.380	.847	1.856	676.
* 115.915	32.2826	215.9	.092	66.64	92.47	4.936	.724	1.198	189.
116.	32.3205	216.1	.092	66.72	92.57	4.937	.723	1.197	189.
118.	33.1993	225.0	.089	68.38	94.94	4.957	.717	1.172	192.
120.	34.0597	233.7	.086	70.01	97.26	4.977	.711	1.150	194.
122.	34.9042	242.0	.083	71.62	99.54	4.995	.707	1.131	197.
124.	35.7347	250.1	.081	73.20	101.79	5.014	.702	1.115	199.
126.	36.5529	258.0	.078	74.76	104.00	5.031	.698	1.100	202.
128.	37.3602	265.7	.076	76.30	106.19	5.049	.695	1.087	204.
130.	38.1576	273.3	.074	77.83	108.35	5.065	.692	1.075	206.
132.	38.9463	280.7	.073	79.34	110.49	5.082	.689	1.065	208.
134.	39.7270	288.0	.071	80.83	112.61	5.098	.687	1.056	210.
136.	40.5005	295.2	.069	82.32	114.72	5.113	.684	1.047	213.
138.	41.2674	302.2	.068	83.79	116.80	5.129	.682	1.040	215.
140.	42.0282	309.2	.066	85.25	118.87	5.143	.680	1.032	217.
142.	42.7836	316.1	.065	86.71	120.93	5.158	.679	1.026	219.
144.	43.5338	322.9	.064	88.15	122.98	5.172	.677	1.020	221.
146.	44.2794	329.6	.062	89.59	125.01	5.186	.676	1.015	222.
148.	45.0205	336.2	.061	91.02	127.04	5.200	.674	1.010	224.
150.	45.7577	342.8	.060	92.45	129.05	5.214	.673	1.005	226.
152.	46.4910	349.3	.059	93.87	131.06	5.227	.672	1.001	228.
154.	47.2209	355.8	.058	95.28	133.06	5.240	.671	.997	230.
156.	47.9474	362.2	.057	96.69	135.04	5.253	.670	.993	232.
158.	48.6709	368.6	.056	98.09	137.03	5.265	.669	.989	233.
160.	49.3915	374.9	.055	99.49	139.00	5.278	.668	.986	235.
165.	51.1815	390.5	.053	102.97	143.91	5.308	.666	.979	240.
170.	52.9568	405.9	.051	106.43	148.79	5.337	.664	.972	244.
175.	54.7193	421.1	.049	109.86	153.64	5.365	.663	.967	248.
180.	56.4707	436.1	.048	113.28	158.46	5.393	.662	.962	252.
185.	58.2123	450.9	.046	116.69	163.26	5.419	.661	.958	256.
190.	59.9451	465.7	.045	120.08	168.04	5.444	.660	.954	259.
195.	61.6702	480.3	.043	123.47	172.80	5.469	.659	.951	263.
200.	63.3883	494.7	.042	126.84	177.55	5.493	.658	.948	267.
210.	66.8063	523.4	.040	133.56	187.01	5.539	.657	.943	274.
220.	70.2039	551.8	.038	140.26	196.42	5.583	.657	.939	281.
230.	73.5845	579.9	.036	146.93	205.80	5.625	.656	.936	288.
240.	76.9510	607.7	.034	153.59	215.15	5.665	.656	.934	294.
250.	80.3054	635.4	.033	160.24	224.48	5.703	.656	.932	300.
260.	83.6498	662.9	.032	166.88	233.80	5.739	.656	.931	307.
270.	86.9853	690.3	.030	173.52	243.11	5.774	.657	.930	313.
280.	90.3134	717.6	.029	180.16	252.41	5.808	.658	.930	319.
290.	93.6349	744.7	.028	186.80	261.71	5.841	.659	.930	324.
300.	96.9507	771.8	.027	193.45	271.01	5.872	.66	.930	330.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

9. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 54.462	.7649	8731.3	39.73	-193.37	-192.69	2.098	1.088	1.664	1155.
56.	.7690	8540.3	38.63	-190.82	-190.13	2.144	1.085	1.664	1144.
58.	.7744	8293.6	37.31	-187.50	-186.80	2.203	1.080	1.664	1130.
60.	.7798	8048.4	36.07	-184.17	-183.47	2.259	1.074	1.664	1117.
62.	.7853	7804.6	34.91	-180.85	-180.15	2.314	1.067	1.663	1103.
64.	.7909	7562.2	33.81	-177.53	-176.82	2.367	1.059	1.664	1090.
66.	.7965	7321.2	32.76	-174.21	-173.49	2.418	1.050	1.664	1077.
68.	.8022	7081.5	31.76	-170.88	-170.16	2.467	1.041	1.665	1064.
70.	.8080	6843.3	30.80	-167.56	-166.83	2.516	1.032	1.665	1051.
72.	.8140	6606.6	29.87	-164.23	-163.50	2.563	1.022	1.666	1038.
74.	.8200	6371.5	28.97	-160.90	-160.17	2.608	1.012	1.668	1025.
76.	.8262	6138.2	28.10	-157.57	-156.83	2.653	1.002	1.669	1011.
78.	.8325	5906.7	27.25	-154.24	-153.49	2.696	.991	1.671	998.
80.	.8390	5677.3	26.42	-150.90	-150.14	2.739	.981	1.673	984.
82.	.8456	5450.1	25.61	-147.56	-146.79	2.780	.970	1.676	970.
84.	.8524	5225.2	24.82	-144.21	-143.44	2.820	.959	1.679	956.
86.	.8594	5002.9	24.04	-140.85	-140.08	2.860	.949	1.683	942.
88.	.8666	4783.3	23.27	-137.49	-136.71	2.899	.938	1.687	927.
90.	.8741	4566.5	22.52	-134.12	-133.33	2.937	.928	1.691	912.
92.	.8817	4352.9	21.77	-130.73	-129.94	2.974	.918	1.697	897.
94.	.8896	4142.4	21.04	-127.34	-126.54	3.010	.908	1.703	881.
96.	.8978	3935.5	20.31	-123.94	-123.13	3.046	.899	1.710	865.
98.	.9063	3732.1	19.59	-120.52	-119.70	3.082	.890	1.717	849.
100.	.9151	3532.5	18.88	-117.08	-116.26	3.116	.881	1.726	832.
102.	.9242	3336.9	18.18	-113.63	-112.79	3.151	.874	1.736	814.
104.	.9337	3145.4	17.48	-110.15	-109.31	3.185	.867	1.748	796.
106.	.9436	2958.2	16.79	-106.65	-105.80	3.218	.861	1.760	778.
108.	.9539	2775.3	16.11	-103.13	-102.27	3.251	.856	1.775	759.
110.	.9647	2597.0	15.43	-99.57	-98.70	3.284	.852	1.791	739.
112.	.9760	2423.2	14.77	-95.98	-95.10	3.316	.849	1.810	719.
114.	.9880	2254.0	14.11	-92.35	-91.46	3.348	.848	1.831	698.
116.	1.0005	2089.3	13.47	-88.68	-87.77	3.380	.847	1.855	677.
* 117.844	1.0127	1941.6	12.89	-85.24	-84.33	3.410	.847	1.881	657.
* 117.844	28.7649	212.3	.105	67.00	92.89	4.913	.731	1.233	189.
118.	28.8287	212.9	.104	67.13	93.08	4.915	.730	1.231	189.
120.	29.6322	222.3	.100	68.84	95.51	4.936	.723	1.202	192.
122.	30.4171	231.2	.097	70.51	97.89	4.955	.717	1.177	195.
124.	31.1860	239.9	.094	72.15	100.22	4.974	.712	1.155	197.
126.	31.9409	248.3	.091	73.76	102.51	4.993	.707	1.136	200.
128.	32.6836	256.5	.088	75.35	104.77	5.010	.703	1.120	202.
130.	33.4153	264.4	.086	76.92	106.99	5.028	.699	1.105	205.
132.	34.1374	272.2	.084	78.47	109.19	5.044	.696	1.092	207.
134.	34.8507	279.9	.082	80.00	111.36	5.061	.693	1.081	209.
136.	35.5562	287.3	.080	81.51	113.51	5.077	.690	1.070	211.
138.	36.2546	294.7	.078	83.02	115.65	5.092	.687	1.061	213.
140.	36.9465	301.9	.076	84.51	117.76	5.107	.685	1.052	215.
142.	37.6326	309.1	.075	85.99	119.86	5.122	.683	1.045	217.
144.	38.3132	316.1	.073	87.46	121.94	5.137	.681	1.038	219.
146.	38.9888	323.1	.072	88.92	124.01	5.151	.679	1.031	221.
148.	39.6598	329.9	.070	90.37	126.06	5.165	.678	1.025	223.
150.	40.3265	336.7	.069	91.81	128.11	5.179	.676	1.019	225.
152.	40.9893	343.4	.068	93.25	130.14	5.192	.675	1.014	227.
154.	41.6484	350.1	.066	94.68	132.16	5.205	.674	1.010	229.
156.	42.3041	356.6	.065	96.11	134.18	5.218	.673	1.005	231.
158.	42.9566	363.2	.064	97.52	136.19	5.231	.672	1.001	233.
160.	43.6061	369.7	.063	98.94	138.18	5.244	.671	.997	234.
165.	45.2178	385.6	.060	102.45	143.15	5.274	.668	.988	239.
170.	46.8145	401.3	.058	105.94	148.07	5.304	.666	.981	243.
175.	48.3981	416.8	.056	109.40	152.96	5.332	.665	.975	247.
180.	49.9702	432.1	.054	112.85	157.82	5.359	.663	.969	251.
185.	51.5322	447.2	.052	116.27	162.65	5.386	.662	.964	255.
190.	53.0854	462.1	.051	119.69	167.46	5.412	.661	.960	259.
195.	54.6307	476.9	.049	123.09	172.26	5.436	.660	.956	263.
200.	56.1689	491.6	.048	126.48	177.03	5.461	.659	.953	267.
210.	59.2269	520.7	.045	133.23	186.53	5.507	.658	.948	274.
220.	62.2641	549.3	.043	139.95	195.99	5.551	.657	.943	281.
230.	65.2843	577.7	.041	146.64	205.40	5.593	.657	.940	287.
240.	68.2901	605.8	.039	153.32	214.78	5.633	.657	.937	294.
250.	71.2839	633.7	.037	159.98	224.14	5.671	.656	.935	300.
260.	74.2675	661.4	.036	166.64	233.48	5.708	.657	.933	307.
270.	77.2422	688.9	.034	173.29	242.81	5.743	.657	.932	313.
280.	80.2095	716.3	.033	179.94	252.13	5.777	.659	.932	319.
290.	83.1701	743.6	.032	186.59	261.45	5.809	.659	.932	324.
300.	86.1250	770.8	.031	193.25	270.76	5.841	.660	.932	330.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

10. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM OERIVATIVE BAR-CM^3/G	ISOCHORE OERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUNO M/S
* 54.474	.7649	8734.9	39.73	-193.37	-192.61	2.098	1.089	1.664	1156.
56.	.7690	8545.5	38.64	-190.83	-190.07	2.144	1.085	1.664	1145.
58.	.7743	8298.8	37.32	-187.51	-186.74	2.203	1.080	1.664	1131.
60.	.7797	8053.7	36.08	-184.19	-183.41	2.259	1.074	1.663	1117.
62.	.7852	7810.1	34.92	-180.87	-180.08	2.314	1.067	1.663	1104.
64.	.7908	7567.8	33.82	-177.55	-176.76	2.366	1.059	1.664	1090.
66.	.7964	7326.9	32.77	-174.23	-173.43	2.418	1.050	1.664	1077.
68.	.8021	7087.3	31.77	-170.90	-170.10	2.467	1.041	1.664	1064.
70.	.8079	6849.2	30.81	-167.58	-166.77	2.515	1.032	1.665	1051.
72.	.8139	6612.6	29.88	-164.26	-163.44	2.562	1.022	1.666	1038.
74.	.8199	6377.7	28.98	-160.93	-160.11	2.608	1.012	1.667	1025.
76.	.8261	6144.5	28.11	-157.60	-156.77	2.653	1.002	1.669	1012.
78.	.8324	5913.1	27.26	-154.26	-153.43	2.696	.991	1.671	998.
80.	.8389	5683.8	26.43	-150.93	-150.09	2.738	.981	1.673	985.
82.	.8455	5456.7	25.62	-147.58	-146.74	2.780	.970	1.676	971.
84.	.8523	5232.0	24.83	-144.24	-143.38	2.820	.960	1.679	957.
86.	.8593	5009.8	24.05	-140.88	-140.02	2.860	.949	1.682	942.
88.	.8665	4790.3	23.28	-137.52	-136.65	2.898	.938	1.686	928.
90.	.8739	4573.7	22.53	-134.15	-133.27	2.936	.928	1.691	913.
92.	.8815	4360.2	21.79	-130.77	-129.89	2.973	.918	1.696	898.
94.	.8894	4149.9	21.05	-127.38	-126.49	3.010	.908	1.702	882.
96.	.8976	3943.1	20.32	-123.97	-123.08	3.046	.899	1.709	866.
98.	.9061	3739.9	19.61	-120.56	-119.65	3.081	.890	1.717	849.
100.	.9148	3540.4	18.89	-117.12	-116.21	3.116	.882	1.725	832.
102.	.9239	3345.0	18.19	-113.67	-112.75	3.150	.874	1.735	815.
104.	.9334	3153.7	17.50	-110.20	-109.27	3.184	.867	1.746	797.
106.	.9433	2966.6	16.81	-106.70	-105.76	3.217	.861	1.759	778.
108.	.9536	2783.9	16.13	-103.18	-102.23	3.250	.856	1.773	759.
110.	.9644	2605.7	15.45	-99.63	-98.67	3.283	.852	1.790	740.
112.	.9757	2432.1	14.79	-96.04	-95.07	3.316	.849	1.808	720.
114.	.9875	2263.1	14.13	-92.42	-91.43	3.348	.848	1.829	699.
116.	1.0000	2098.7	13.49	-88.75	-87.75	3.380	.847	1.853	678.
118.	1.0133	1938.7	12.86	-85.03	-84.02	3.412	.847	1.881	656.
* 119.623	1.0246	1812.1	12.36	-81.97	-80.94	3.438	.848	1.907	638.
* 119.623	25.9192	208.6	.117	67.26	93.18	4.893	.738	1.269	189.
120.	26.0614	210.3	.116	67.60	93.66	4.897	.736	1.262	190.
122.	26.8033	220.0	.112	69.35	96.15	4.918	.729	1.229	193.
124.	27.5265	229.3	.108	71.05	98.58	4.937	.722	1.201	195.
126.	28.2338	238.2	.105	72.72	100.96	4.956	.716	1.178	198.
128.	28.9271	246.9	.101	74.36	103.29	4.975	.711	1.157	200.
130.	29.6083	255.3	.098	75.98	105.59	4.993	.707	1.139	203.
132.	30.2787	263.5	.096	77.57	107.85	5.010	.702	1.123	205.
134.	30.9396	271.5	.093	79.14	110.08	5.027	.699	1.108	208.
136.	31.5919	279.4	.091	80.69	112.28	5.043	.696	1.096	210.
138.	32.2366	287.0	.089	82.22	114.46	5.059	.693	1.084	212.
140.	32.8742	294.6	.086	83.74	116.62	5.074	.690	1.074	214.
142.	33.5055	302.0	.085	85.25	118.76	5.089	.688	1.065	216.
144.	34.1310	309.3	.083	86.75	120.88	5.104	.685	1.056	218.
146.	34.7513	316.4	.081	88.23	122.98	5.119	.683	1.048	220.
148.	35.3667	323.5	.079	89.70	125.07	5.133	.681	1.041	222.
150.	35.9775	330.5	.078	91.17	127.15	5.147	.680	1.035	224.
152.	36.5843	337.4	.076	92.63	129.21	5.161	.678	1.029	226.
154.	37.1871	344.3	.075	94.07	131.26	5.174	.677	1.023	228.
156.	37.7864	351.0	.073	95.52	133.30	5.187	.675	1.019	230.
158.	38.3824	357.7	.072	96.95	135.33	5.200	.674	1.013	232.
160.	38.9753	364.4	.071	98.38	137.35	5.213	.673	1.009	234.
165.	40.4450	380.7	.068	101.93	142.37	5.244	.670	.999	238.
170.	41.8992	396.8	.065	105.44	147.34	5.273	.663	.990	242.
175.	43.3398	412.5	.063	108.94	152.28	5.302	.666	.983	247.
180.	44.7688	428.1	.061	112.40	157.17	5.330	.665	.977	251.
185.	46.1875	443.4	.059	115.85	162.04	5.356	.664	.971	255.
190.	47.5971	458.6	.057	119.29	166.89	5.382	.662	.966	259.
195.	48.9987	473.6	.055	122.71	171.71	5.407	.661	.962	262.
200.	50.3931	488.5	.054	126.11	176.51	5.431	.660	.958	266.
210.	53.1632	517.9	.051	132.89	186.06	5.478	.659	.952	274.
220.	55.9123	546.9	.048	139.64	195.55	5.522	.658	.947	281.
230.	58.6441	575.5	.046	146.35	205.00	5.564	.657	.943	287.
240.	61.3616	603.8	.043	153.05	214.41	5.604	.657	.940	294.
250.	64.0668	631.9	.042	159.73	223.80	5.643	.657	.937	300.
260.	66.7618	659.8	.040	166.40	233.16	5.679	.657	.936	307.
270.	69.4480	687.6	.038	173.07	242.51	5.715	.658	.934	313.
280.	72.1266	715.1	.037	179.73	251.85	5.749	.658	.934	318.
290.	74.7985	742.6	.035	186.39	261.19	5.701	.659	.933	324.
300.	77.4647	769.9	.034	193.06	270.52	5.813	.660	.933	330.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

15. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 54.531	.7647	8753.2	39.73	-193.35	-192.20	2.099	1.089	1.664	1156.
56.	.7686	8571.3	38.69	-190.91	-189.76	2.143	1.086	1.664	1146.
58.	.7740	8325.1	37.36	-187.59	-186.43	2.201	1.081	1.663	1132.
60.	.7794	8080.6	36.12	-184.27	-183.10	2.258	1.074	1.663	1118.
62.	.7848	7837.4	34.96	-180.95	-179.78	2.312	1.067	1.663	1105.
64.	.7904	7595.7	33.86	-177.64	-176.45	2.365	1.059	1.663	1092.
66.	.7960	7355.3	32.81	-174.32	-173.13	2.416	1.051	1.663	1079.
68.	.8017	7116.3	31.81	-171.00	-169.80	2.466	1.042	1.664	1066.
70.	.8075	6878.8	30.85	-167.68	-166.47	2.514	1.033	1.664	1053.
72.	.8134	6642.7	29.93	-164.36	-163.14	2.561	1.023	1.665	1040.
74.	.8194	6408.4	29.03	-161.04	-159.81	2.607	1.013	1.666	1027.
76.	.8255	6175.7	28.16	-157.71	-156.48	2.651	1.003	1.668	1014.
78.	.8318	5945.0	27.31	-154.39	-153.14	2.694	.992	1.669	1000.
80.	.8383	5716.3	26.48	-151.06	-149.80	2.737	.982	1.671	987.
82.	.8449	5489.9	25.68	-147.72	-146.45	2.778	.971	1.674	973.
84.	.8516	5265.8	24.88	-144.38	-143.10	2.818	.960	1.677	959.
86.	.8586	5044.2	24.11	-141.03	-139.74	2.858	.950	1.680	945.
88.	.8657	4825.4	23.34	-137.68	-136.38	2.896	.939	1.684	930.
90.	.8731	4609.5	22.59	-134.32	-133.01	2.934	.929	1.688	915.
92.	.8807	4396.6	21.85	-130.95	-129.62	2.972	.919	1.693	900.
94.	.8885	4187.1	21.11	-127.56	-126.23	3.008	.909	1.699	885.
96.	.8966	3981.0	20.39	-124.17	-122.83	3.044	.90?	1.705	869.
98.	.9050	3778.6	19.67	-120.77	-119.41	3.079	.891	1.713	852.
100.	.9137	3579.9	18.97	-117.34	-115.97	3.114	.882	1.721	836.
102.	.9227	3385.3	18.27	-113.91	-112.52	3.148	.875	1.731	818.
104.	.9320	3194.7	17.57	-110.45	-109.05	3.182	.868	1.741	801.
106.	.9418	3008.5	16.89	-106.97	-105.56	3.215	.862	1.754	782.
108.	.9520	2826.7	16.21	-103.46	-102.04	3.248	.857	1.767	763.
110.	.9626	2649.4	15.54	-99.93	-98.49	3.280	.853	1.783	744.
112.	.9737	2476.6	14.88	-96.36	-94.90	3.313	.851	1.800	724.
114.	.9854	2308.5	14.23	-92.76	-91.28	3.345	.849	1.820	704.
116.	.9977	2145.0	13.60	-89.12	-87.62	3.377	.848	1.843	683.
118.	1.0107	1986.0	12.97	-85.42	-83.91	3.408	.848	1.869	662.
120.	1.0244	1831.3	12.36	-81.67	-80.14	3.440	.848	1.899	640.
122.	1.0390	1680.7	11.77	-77.86	-76.30	3.472	.848	1.934	619.
124.	1.0547	1533.8	11.20	-73.97	-72.39	3.504	.847	1.975	598.
126.	1.0716	1390.1	10.65	-70.00	-68.39	3.536	.843	2.024	578.
* 126.984	1.0805	1320.4	10.39	-68.00	-66.38	3.551	.839	2.052	568.
* 126.984	17.1637	187.9	.186	67.64	93.39	4.809	.772	1.464	189.
128.	17.4576	193.8	.182	68.67	94.86	4.821	.766	1.431	190.
130.	18.0182	205.4	.174	70.64	97.66	4.843	.755	1.376	194.
132.	18.5587	216.3	.167	72.53	100.37	4.864	.745	1.331	197.
134.	19.0823	226.7	.161	74.37	102.99	4.883	.737	1.293	199.
136.	19.5917	236.7	.155	76.16	105.55	4.902	.730	1.260	202.
138.	20.0887	246.4	.150	77.90	108.04	4.920	.724	1.233	205.
140.	20.5751	255.7	.145	79.62	110.48	4.938	.718	1.208	207.
142.	21.0521	264.7	.141	81.30	112.87	4.955	.713	1.187	210.
144.	21.5208	273.5	.137	82.95	115.23	4.971	.709	1.168	212.
146.	21.9822	282.1	.134	84.58	117.55	4.987	.705	1.152	215.
148.	22.4368	290.4	.130	86.18	119.84	5.003	.702	1.137	217.
150.	22.8855	298.6	.127	87.77	122.10	5.018	.698	1.123	219.
152.	23.3288	306.7	.124	89.34	124.33	5.033	.695	1.111	221.
154.	23.7671	314.5	.121	90.89	126.54	5.047	.693	1.100	224.
156.	24.2009	322.3	.119	92.43	128.73	5.061	.690	1.090	226.
158.	24.6306	329.9	.116	93.96	130.91	5.075	.688	1.081	228.
160.	25.0564	337.4	.114	95.47	133.06	5.089	.686	1.073	230.
165.	26.1060	355.8	.109	99.22	138.38	5.122	.682	1.054	235.
170.	27.1372	373.6	.104	102.90	143.61	5.153	.678	1.039	239.
175.	28.1528	391.0	.100	106.54	148.77	5.183	.675	1.026	244.
180.	29.1550	408.0	.096	110.14	153.88	5.212	.673	1.016	248.
185.	30.1458	424.6	.092	113.71	158.93	5.239	.670	1.006	252.
190.	31.1265	441.0	.089	117.25	163.94	5.266	.669	.998	257.
195.	32.0985	457.1	.086	120.77	168.91	5.292	.667	.991	261.
200.	33.0626	473.0	.083	124.26	173.85	5.317	.666	.985	265.
210.	34.9709	504.1	.078	131.19	183.65	5.365	.663	.975	272.
220.	36.8569	534.7	.074	138.07	193.35	5.410	.662	.966	279.
230.	38.7246	564.7	.070	144.90	202.98	5.453	.660	.960	286.
240.	40.5774	594.2	.067	151.69	212.55	5.493	.659	.955	293.
250.	42.4175	623.4	.064	158.45	222.08	5.532	.659	.951	300.
260.	44.2470	652.2	.061	165.20	231.57	5.569	.659	.947	306.
270.	46.0675	680.8	.058	171.93	241.03	5.605	.659	.945	312.
280.	47.8802	709.2	.056	178.64	250.46	5.639	.659	.943	318.
290.	49.6862	737.4	.054	185.36	259.89	5.672	.660	.942	324.
300.	51.4863	765.4	.052	192.07	269.30	5.704	.661	.941	330.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

20. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 54.589	.7645	8771.5	39.73	-193.32	-191.79	2.099	1.090	1.664	1157.
56.	.7683	8597.1	38.73	-190.98	-189.45	2.142	1.087	1.663	1147.
58.	.7736	8351.4	37.41	-187.67	-186.12	2.200	1.081	1.663	1133.
60.	.7790	8107.3	36.17	-184.35	-182.79	2.256	1.075	1.663	1120.
62.	.7844	7864.7	35.01	-181.04	-179.47	2.311	1.068	1.662	1106.
64.	.7899	7623.5	33.91	-177.73	-176.15	2.364	1.060	1.662	1093.
66.	.7955	7383.7	32.86	-174.41	-172.82	2.415	1.052	1.662	1080.
68.	.8012	7145.2	31.86	-171.10	-169.50	2.464	1.043	1.663	1067.
70.	.8070	6908.2	30.90	-167.78	-166.17	2.513	1.033	1.663	1055.
72.	.8129	6672.8	29.97	-164.47	-162.84	2.559	1.023	1.664	1042.
74.	.8189	6439.0	29.08	-161.15	-159.51	2.605	1.013	1.665	1029.
76.	.8250	6206.9	28.21	-157.83	-156.18	2.649	1.003	1.666	1015.
78.	.8312	5976.8	27.36	-154.51	-152.85	2.693	.993	1.668	1002.
80.	.8376	5748.7	26.54	-151.18	-149.51	2.735	.982	1.670	989.
82.	.8442	5522.8	25.73	-147.85	-146.17	2.776	.972	1.672	975.
84.	.8509	5299.4	24.94	-144.52	-142.82	2.817	.961	1.675	961.
86.	.8578	5078.5	24.16	-141.18	-139.47	2.856	.950	1.678	947.
88.	.8649	4860.3	23.40	-137.84	-136.11	2.895	.940	1.682	932.
90.	.8722	4645.1	22.65	-134.48	-132.74	2.932	.930	1.686	918.
92.	.8798	4432.9	21.91	-131.12	-129.36	2.970	.920	1.690	903.
94.	.8876	4224.1	21.18	-127.75	-125.97	3.006	.910	1.696	887.
96.	.8956	4018.7	20.45	-124.37	-122.58	3.042	.901	1.702	872.
98.	.9039	3817.0	19.74	-120.97	-119.16	3.077	.892	1.709	855.
100.	.9125	3619.1	19.04	-117.56	-115.74	3.112	.883	1.717	839.
102.	.9214	3425.2	18.34	-114.14	-112.29	3.146	.876	1.726	822.
104.	.9307	3235.5	17.65	-110.69	-108.83	3.179	.869	1.736	804.
106.	.9403	3050.1	16.97	-107.23	-105.35	3.212	.863	1.748	786.
108.	.9504	2869.1	16.30	-103.74	-101.84	3.245	.858	1.761	767.
110.	.9609	2692.6	15.63	-100.22	-98.30	3.278	.854	1.776	748.
112.	.9718	2520.7	14.98	-96.68	-94.73	3.310	.852	1.793	729.
114.	.9833	2353.4	14.33	-93.10	-91.13	3.342	.850	1.812	708.
116.	.9954	2190.8	13.70	-89.47	-87.48	3.374	.849	1.834	688.
118.	1.0081	2032.6	13.08	-85.81	-83.79	3.405	.849	1.858	667.
120.	1.0216	1878.9	12.48	-82.09	-80.05	3.437	.849	1.887	646.
122.	1.0359	1729.2	11.89	-78.31	-76.24	3.468	.849	1.919	625.
124.	1.0512	1583.2	11.32	-74.47	-72.36	3.500	.847	1.957	605.
126.	1.0676	1440.4	10.78	-70.54	-68.40	3.531	.843	2.001	585.
128.	1.0854	1300.1	10.27	-66.51	-64.34	3.563	.832	2.055	567.
130.	1.1051	1175.6	9.77	-62.36	-60.15	3.596	.834	2.123	547.
132.	1.1269	1031.3	9.23	-58.03	-55.77	3.629	.826	2.210	525.
* 132.743	1.1357	972.4	8.98	-56.38	-54.10	3.642	.824	2.244	515.
* 132.743	12.6066	164.9	.265	66.94	92.16	4.744	.804	1.705	187.
134.	12.9215	174.0	.256	68.41	94.26	4.759	.793	1.636	189.
136.	13.3990	187.7	.243	70.64	97.44	4.783	.779	1.547	193.
138.	13.8531	200.4	.232	72.75	100.46	4.805	.766	1.476	196.
140.	14.2882	212.3	.222	74.77	103.35	4.826	.756	1.419	200.
142.	14.7077	223.7	.213	76.72	106.14	4.846	.747	1.372	203.
144.	15.1140	234.6	.206	78.61	108.84	4.864	.739	1.332	206.
146.	15.5092	245.0	.199	80.45	111.47	4.883	.732	1.298	208.
148.	15.8947	255.0	.192	82.24	114.03	4.900	.726	1.268	211.
150.	16.2717	264.7	.187	84.00	116.54	4.917	.721	1.243	214.
152.	16.6412	274.1	.181	85.72	119.01	4.933	.716	1.220	216.
154.	17.0041	283.3	.176	87.42	121.43	4.949	.711	1.200	219.
156.	17.3611	292.2	.172	89.09	123.81	4.964	.708	1.182	221.
158.	17.7128	301.0	.167	90.73	126.16	4.979	.704	1.166	223.
160.	18.0596	309.5	.163	92.35	128.47	4.994	.701	1.152	225.
165.	18.9082	330.2	.155	96.33	134.15	5.029	.694	1.121	231.
170.	19.7346	350.0	.147	100.22	139.69	5.062	.689	1.096	236.
175.	20.5427	369.1	.140	104.04	145.12	5.093	.684	1.076	241.
180.	21.3355	387.7	.134	107.79	150.46	5.123	.681	1.059	246.
185.	22.1154	405.7	.128	111.49	155.72	5.152	.678	1.045	250.
190.	22.8841	423.3	.123	115.15	160.92	5.180	.675	1.033	255.
195.	23.6432	440.6	.119	118.77	166.06	5.207	.673	1.023	259.
200.	24.3938	457.5	.115	122.36	171.15	5.232	.671	1.014	263.
210.	25.8734	490.5	.107	129.46	181.20	5.282	.667	.999	271.
220.	27.3294	522.6	.101	136.47	191.13	5.328	.665	.987	278.
230.	28.7661	554.0	.096	143.42	200.95	5.371	.663	.977	286.
240.	30.1872	584.8	.091	150.31	210.68	5.413	.662	.970	293.
250.	31.5953	615.0	.086	157.16	220.35	5.452	.661	.964	299.
260.	32.9923	644.9	.082	163.98	229.97	5.490	.661	.959	306.
270.	34.3801	674.3	.079	170.78	239.54	5.526	.660	.955	312.
280.	35.7600	703.5	.076	177.56	249.08	5.561	.661	.952	318.
290.	37.1331	732.4	.073	184.32	258.59	5.594	.661	.950	324.
300.	38.5002	761.1	.070	191.08	268.08	5.626	.662	.949	330.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

25. BAR ISOBAR

	TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
*	54.646	.7643	8789.7	39.73	-193.30	-191.39	2.099	1.090	1.664	1158.
	56.	.7679	8622.7	38.78	-191.06	-189.14	2.140	1.087	1.663	1148.
	58.	.7732	8377.6	37.45	-187.74	-185.81	2.199	1.082	1.663	1135.
	60.	.7786	8134.1	36.21	-184.43	-182.49	2.255	1.076	1.662	1121.
	62.	.7840	7892.0	35.05	-181.12	-179.16	2.309	1.068	1.662	1108.
	64.	.7895	7651.3	33.95	-177.81	-175.84	2.362	1.061	1.662	1095.
	66.	.7951	7412.0	32.90	-174.50	-172.52	2.413	1.052	1.662	1082.
	68.	.8008	7174.1	31.90	-171.19	-169.19	2.463	1.043	1.662	1069.
	70.	.8065	6937.6	30.94	-167.88	-165.87	2.511	1.034	1.662	1056.
	72.	.8124	6702.7	30.02	-164.57	-162.54	2.558	1.024	1.663	1043.
	74.	.8183	6469.5	29.12	-161.26	-159.22	2.603	1.014	1.664	1030.
	76.	.8244	6238.0	28.26	-157.95	-155.89	2.648	1.004	1.665	1017.
	78.	.8307	6008.4	27.41	-154.63	-152.55	2.691	.993	1.666	1004.
	80.	.8370	5781.0	26.59	-151.31	-149.22	2.733	.983	1.668	991.
	82.	.8436	5555.7	25.78	-147.99	-145.88	2.775	.972	1.670	977.
	84.	.8502	5332.9	24.99	-144.66	-142.54	2.815	.962	1.673	963.
	86.	.8571	5112.6	24.22	-141.33	-139.19	2.854	.951	1.676	949.
	88.	.8642	4895.1	23.45	-137.99	-135.83	2.893	.941	1.679	935.
	90.	.8714	4680.5	22.70	-134.65	-132.47	2.931	.930	1.683	920.
	92.	.8789	4469.0	21.97	-131.29	-129.10	2.968	.920	1.688	905.
	94.	.8866	4260.9	21.24	-127.93	-125.72	3.004	.911	1.693	890.
	96.	.8946	4056.2	20.52	-124.56	-122.32	3.040	.901	1.699	874.
	98.	.9028	3855.2	19.81	-121.18	-118.92	3.075	.893	1.706	858.
	100.	.9113	3658.1	19.11	-117.78	-115.50	3.109	.884	1.713	842.
	102.	.9202	3464.9	18.41	-114.36	-112.06	3.143	.877	1.722	825.
	104.	.9294	3276.0	17.73	-110.93	-108.61	3.177	.870	1.732	807.
	106.	.9389	3091.3	17.05	-107.48	-105.14	3.210	.864	1.743	790.
	108.	.9488	2911.1	16.38	-104.01	-101.64	3.243	.859	1.755	771.
	110.	.9592	2735.4	15.72	-100.51	-98.11	3.275	.855	1.770	752.
	112.	.9700	2564.3	15.07	-96.98	-94.56	3.307	.853	1.786	733.
	114.	.9813	2397.9	14.43	-93.42	-90.97	3.339	.851	1.804	713.
	116.	.9932	2236.1	13.80	-89.83	-87.34	3.370	.850	1.824	693.
	118.	1.0057	2078.8	13.19	-86.18	-83.67	3.402	.850	1.848	672.
	120.	1.0189	1925.8	12.59	-82.50	-79.95	3.433	.850	1.874	652.
	122.	1.0328	1777.0	12.01	-78.75	-76.17	3.464	.849	1.905	631.
	124.	1.0477	1631.9	11.45	-74.94	-72.32	3.496	.847	1.940	611.
	126.	1.0637	1489.9	10.91	-71.06	-68.40	3.527	.842	1.980	592.
	128.	1.0810	1350.5	10.40	-67.09	-64.39	3.559	.831	2.028	574.
	130.	1.1000	1224.5	9.86	-63.00	-60.25	3.591	.834	2.083	553.
	132.	1.1209	1082.6	9.39	-58.75	-55.95	3.624	.827	2.179	534.
	134.	1.1442	940.3	8.76	-54.35	-51.49	3.657	.822	2.254	508.
	136.	1.1706	796.2	8.13	-49.77	-46.84	3.691	.822	2.368	479.
*	137.544	1.1938	688.8	7.64	-46.05	-43.07	3.719	.823	2.484	456.
*	137.544	9.7714	140.9	.357	65.44	89.87	4.686	.835	2.027	185.
	138.	9.8805	145.0	.352	66.08	90.78	4.692	.830	1.979	186.
	140.	10.3337	161.7	.329	68.73	94.56	4.719	.809	1.812	190.
	142.	10.7537	176.9	.311	71.17	98.06	4.744	.792	1.690	194.
	144.	11.1488	190.9	.295	73.47	101.34	4.767	.778	1.596	198.
	146.	11.5243	204.0	.282	75.64	104.45	4.789	.767	1.522	201.
	148.	11.8840	216.4	.270	77.73	107.44	4.809	.756	1.462	205.
	150.	12.2306	228.2	.260	79.73	110.31	4.828	.748	1.412	208.
	152.	12.5662	239.4	.251	81.67	113.09	4.847	.740	1.370	210.
	154.	12.8923	250.2	.242	83.56	115.79	4.864	.733	1.334	213.
	156.	13.2103	260.6	.235	85.40	118.43	4.881	.727	1.302	216.
	158.	13.5211	270.7	.228	87.20	121.00	4.898	.722	1.275	219.
	160.	13.8255	280.4	.221	88.97	123.53	4.914	.717	1.251	221.
	165.	14.5632	303.8	.207	93.25	129.66	4.951	.708	1.202	227.
	170.	15.2735	325.9	.195	97.38	135.57	4.987	.700	1.164	233.
	175.	15.9621	346.9	.185	101.40	141.31	5.020	.694	1.134	238.
	180.	16.6330	367.1	.176	105.33	146.91	5.051	.689	1.109	243.
	185.	17.2892	386.7	.168	109.18	152.40	5.082	.685	1.089	248.
	190.	17.9328	405.6	.161	112.97	157.80	5.110	.681	1.072	253.
	195.	18.5659	424.1	.155	116.71	163.13	5.138	.678	1.057	257.
	200.	19.1897	442.1	.149	120.40	168.38	5.165	.676	1.045	261.
	210.	20.4141	477.1	.139	127.68	178.72	5.215	.672	1.024	270.
	220.	21.6133	510.8	.130	134.84	188.88	5.262	.669	1.008	278.
	230.	22.7923	543.6	.122	141.91	198.89	5.307	.666	.996	285.
	240.	23.9549	575.6	.116	148.91	208.80	5.349	.664	.986	292.
	250.	25.1040	606.9	.110	155.86	218.62	5.389	.663	.978	299.
	260.	26.2419	637.7	.105	162.76	228.36	5.427	.662	.971	306.
	270.	27.3702	668.1	.100	169.62	238.05	5.464	.662	.966	312.
	280.	28.4905	698.0	.096	176.46	247.69	5.499	.662	.962	319.
	290.	29.6038	727.6	.092	183.28	257.29	5.533	.662	.959	325.
	300.	30.7111	757.0	.089	190.09	266.87	5.565	.663	.956	331.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

30. BAR ISOBAR

TEMPERATURE K	VOLUME CM3/G	ISOTHERM OERIVATIVE BAR-CM3/G	ISOCHORE OERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	Cv J/G-K	Cp J/G-K	VELOCITY OF SOUND M/S
* 54.703	.7642	8808.0	39.74	-193.28	-190.98	2.100	1.091	1.663	1159.
56.	.7676	8648.4	38.82	-191.13	-188.83	2.139	1.088	1.663	1150.
58.	.7729	8403.8	37.49	-187.82	-185.50	2.197	1.083	1.662	1136.
60.	.7782	8160.7	36.26	-184.51	-182.18	2.254	1.076	1.662	1122.
62.	.7837	7919.2	35.09	-181.21	-178.86	2.308	1.069	1.661	1109.
64.	.7891	7679.0	34.00	-177.90	-175.53	2.361	1.061	1.661	1096.
66.	.7947	7440.2	32.95	-174.60	-172.21	2.412	1.053	1.661	1083.
68.	.8003	7202.8	31.95	-171.29	-168.89	2.461	1.044	1.661	1071.
70.	.8061	6966.9	30.99	-167.98	-165.57	2.510	1.034	1.661	1058.
72.	.8119	6732.6	30.07	-164.68	-162.24	2.556	1.025	1.662	1045.
74.	.8178	6499.9	29.17	-161.37	-158.92	2.602	1.015	1.663	1032.
76.	.8239	6269.0	28.30	-158.06	-155.59	2.646	1.005	1.664	1019.
78.	.8301	6040.0	27.46	-154.75	-152.26	2.690	.994	1.665	1006.
80.	.8364	5813.1	26.64	-151.44	-148.93	2.732	.984	1.667	992.
82.	.8429	5588.4	25.83	-148.12	-145.59	2.773	.973	1.669	979.
84.	.8496	5366.2	25.04	-144.80	-142.25	2.813	.962	1.671	965.
86.	.8564	5146.6	24.27	-141.48	-138.91	2.853	.952	1.674	951.
88.	.8634	4929.7	23.51	-138.15	-135.56	2.891	.942	1.677	937.
90.	.8706	4715.7	22.76	-134.81	-132.20	2.929	.931	1.681	923.
92.	.8781	4504.9	22.03	-131.47	-128.83	2.966	.921	1.685	908.
94.	.8857	4297.5	21.30	-128.11	-125.46	3.002	.912	1.690	893.
96.	.8936	4093.5	20.58	-124.75	-122.07	3.038	.902	1.696	877.
98.	.9018	3893.2	19.87	-121.38	-118.67	3.073	.894	1.702	861.
100.	.9102	3696.8	19.18	-117.99	-115.26	3.107	.885	1.709	845.
102.	.9190	3504.4	18.48	-114.59	-111.83	3.141	.878	1.718	828.
104.	.9280	3316.1	17.80	-111.17	-108.39	3.175	.871	1.727	811.
106.	.9375	3132.2	17.13	-107.74	-104.92	3.208	.865	1.738	793.
108.	.9473	2952.8	16.46	-104.28	-101.44	3.240	.860	1.750	775.
110.	.9575	2777.9	15.81	-100.80	-97.92	3.272	.856	1.763	756.
112.	.9682	2607.6	15.16	-97.29	-94.38	3.304	.854	1.779	737.
114.	.9793	2441.9	14.52	-93.75	-90.81	3.336	.852	1.796	718.
116.	.9910	2280.9	13.90	-90.17	-87.20	3.367	.851	1.816	698.
118.	1.0033	2124.4	13.29	-86.55	-83.54	3.399	.850	1.838	678.
120.	1.0162	1972.3	12.70	-82.89	-79.84	3.430	.850	1.863	657.
122.	1.0299	1824.2	12.12	-79.16	-76.09	3.461	.850	1.891	637.
124.	1.0444	1679.9	11.56	-75.40	-72.27	3.492	.847	1.924	618.
126.	1.0600	1538.8	11.03	-71.56	-68.38	3.523	.842	1.961	599.
128.	1.0767	1400.2	10.52	-67.64	-64.41	3.554	.830	2.004	581.
130.	1.0952	1272.9	9.96	-63.61	-60.32	3.586	.833	2.049	560.
132.	1.1153	1133.2	9.55	-59.44	-56.09	3.618	.828	2.148	542.
134.	1.1375	993.4	8.94	-55.13	-51.72	3.651	.822	2.216	518.
136.	1.1624	854.6	8.32	-50.67	-47.18	3.685	.820	2.310	491.
138.	1.1909	718.9	7.72	-45.98	-42.41	3.719	.822	2.444	462.
140.	1.2242	578.5	7.08	-41.01	-37.34	3.756	.823	2.643	431.
* 141.694	1.2581	463.7	6.50	-36.48	-32.70	3.789	.831	2.874	401.
* 141.694	7.8056	115.7	.467	63.16	86.58	4.631	.868	2.495	182.
142.	7.8800	119.1	.460	63.69	87.33	4.636	.863	2.433	183.
144.	8.3292	139.3	.424	66.88	91.87	4.668	.835	2.127	188.
146.	8.7319	157.1	.396	69.72	95.91	4.696	.814	1.927	193.
148.	9.1024	173.1	.374	72.31	99.62	4.721	.797	1.785	197.
150.	9.4491	187.9	.354	74.73	103.07	4.744	.782	1.677	201.
152.	9.7774	201.7	.338	77.01	106.34	4.766	.770	1.593	204.
154.	10.0909	214.7	.324	79.18	109.46	4.786	.760	1.525	208.
156.	10.3923	227.0	.311	81.27	112.45	4.805	.751	1.469	211.
158.	10.6834	238.7	.300	83.29	115.34	4.824	.743	1.421	214.
160.	10.9657	250.0	.289	85.24	118.14	4.841	.736	1.381	217.
169.	11.6407	276.6	.268	89.92	124.84	4.883	.723	1.302	223.
170.	12.2811	301.2	.250	94.35	131.20	4.921	.712	1.245	229.
175.	12.8952	324.4	.235	98.62	137.31	4.956	.704	1.200	235.
180.	13.4884	346.5	.223	102.75	143.22	4.989	.698	1.166	241.
185.	14.0647	367.6	.211	106.78	148.97	5.021	.692	1.137	246.
190.	14.6271	388.0	.202	110.72	154.60	5.051	.688	1.114	251.
195.	15.1777	407.7	.193	114.59	160.12	5.080	.684	1.095	255.
200.	15.7181	426.9	.185	118.40	165.55	5.107	.681	1.073	260.
210.	16.7741	463.8	.172	125.87	176.19	5.159	.676	1.051	269.
220.	17.8031	499.2	.160	133.19	186.60	5.207	.672	1.031	277.
230.	18.8109	533.4	.151	140.39	196.82	5.253	.669	1.015	284.
240.	19.8017	566.6	.142	147.50	206.91	5.296	.667	1.002	292.
250.	20.7785	599.0	.135	154.54	216.68	5.337	.665	.992	299.
260.	21.7436	630.8	.128	161.52	226.76	5.375	.664	.984	306.
270.	22.6991	662.0	.122	168.46	236.56	5.412	.663	.977	312.
280.	23.6463	692.8	.117	175.36	246.30	5.448	.663	.972	319.
290.	24.5864	723.1	.112	182.24	256.00	5.482	.663	.968	325.
300.	25.5205	753.1	.108	189.09	265.66	5.514	.663	.964	331.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

35. BAR ISOBAR

	TEMPERATURE K	VOLUME CM3/G	ISOTHERM DERIVATIVE BAR-CM3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	Cv J/G-K	Cp J/G-K	VELOCITY OF SOUND M/S
*	54.760	.7640	8626.2	39.74	-193.25	-190.58	2.100	1.091	1.663	1160.
	56.	.7672	8674.0	38.86	-191.20	-188.52	2.138	1.089	1.663	1151.
	58.	.7725	8429.8	37.54	-187.90	-185.19	2.196	1.083	1.662	1137.
	60.	.7779	8187.3	36.30	-184.59	-181.87	2.252	1.077	1.661	1124.
	62.	.7833	7946.3	35.14	-181.29	-178.55	2.307	1.070	1.661	1111.
	64.	.7887	7706.6	34.04	-177.99	-175.23	2.359	1.062	1.660	1098.
	66.	.7943	7468.4	32.99	-174.69	-171.91	2.410	1.053	1.660	1085.
	68.	.7999	7231.5	32.00	-171.39	-168.59	2.460	1.044	1.660	1072.
	70.	.8056	6996.1	31.04	-168.08	-165.26	2.508	1.035	1.661	1059.
	72.	.8114	6762.3	30.11	-164.78	-161.94	2.555	1.025	1.661	1047.
	74.	.8173	6530.2	29.22	-161.48	-158.62	2.600	1.015	1.662	1034.
	76.	.8234	6299.8	28.35	-158.18	-155.30	2.645	1.005	1.663	1021.
	78.	.8295	6071.4	27.51	-154.87	-151.97	2.688	.995	1.664	1008.
	80.	.8358	5845.1	26.69	-151.56	-148.64	2.730	.984	1.665	994.
	82.	.8423	5621.1	25.88	-148.25	-145.31	2.771	.974	1.667	981.
	84.	.8489	5399.4	25.10	-144.94	-141.97	2.812	.963	1.669	967.
	86.	.8557	5180.4	24.32	-141.62	-138.63	2.851	.953	1.672	953.
	88.	.8627	4964.1	23.56	-138.30	-135.28	2.889	.942	1.675	939.
	90.	.8698	4750.8	22.82	-134.97	-131.93	2.927	.932	1.678	925.
	92.	.8772	4540.7	22.08	-131.64	-128.57	2.964	.922	1.682	910.
	94.	.8848	4333.9	21.36	-128.29	-125.20	3.000	.912	1.687	895.
	96.	.8926	4130.6	20.65	-124.94	-121.82	3.036	.903	1.693	880.
	98.	.9007	3931.0	19.94	-121.58	-118.42	3.071	.894	1.699	864.
	100.	.9091	3735.2	19.24	-118.20	-115.02	3.105	.886	1.706	848.
	102.	.9178	3543.5	18.56	-114.81	-111.60	3.139	.879	1.714	831.
	104.	.9268	3356.0	17.88	-111.41	-108.16	3.172	.872	1.723	814.
	106.	.9361	3172.9	17.20	-107.98	-104.71	3.205	.866	1.733	797.
	108.	.9458	2994.1	16.54	-104.54	-101.23	3.238	.861	1.744	779.
	110.	.9559	2820.0	15.89	-101.08	-97.73	3.270	.857	1.757	760.
	112.	.9664	2650.4	15.25	-97.58	-94.20	3.302	.855	1.772	741.
	114.	.9774	2485.5	14.62	-94.06	-90.64	3.333	.853	1.789	722.
	116.	.9889	2325.3	14.00	-90.51	-87.05	3.364	.852	1.807	702.
	118.	1.0009	2169.5	13.39	-86.91	-83.41	3.396	.851	1.828	683.
	120.	1.0136	2018.1	12.80	-83.28	-79.73	3.426	.851	1.852	663.
	122.	1.0270	1870.9	12.23	-79.59	-76.00	3.457	.850	1.879	643.
	124.	1.0412	1727.3	11.68	-75.85	-72.21	3.488	.847	1.909	624.
	126.	1.0564	1587.0	11.15	-72.05	-68.35	3.519	.841	1.943	605.
	128.	1.0727	1449.2	10.65	-68.18	-64.43	3.550	.829	1.981	588.
	130.	1.0906	1320.9	10.10	-64.19	-60.38	3.581	.832	2.027	567.
	132.	1.1099	1183.1	9.66	-60.10	-56.21	3.613	.829	2.111	549.
	134.	1.1312	1045.5	9.10	-55.87	-51.91	3.645	.822	2.180	527.
	136.	1.1548	911.0	8.51	-51.51	-47.47	3.678	.819	2.260	501.
	138.	1.1815	778.4	7.91	-46.97	-42.83	3.712	.820	2.370	474.
	140.	1.2121	644.8	7.32	-42.20	-37.95	3.747	.821	2.529	446.
	142.	1.2485	515.9	6.67	-37.09	-32.72	3.784	.826	2.732	413.
	144.	1.2938	384.2	5.98	-31.49	-26.97	3.825	.839	3.080	376.
*	145.363	1.3333	295.9	5.52	-27.22	-22.55	3.855	.854	3.519	349.
*	145.363	6.3292	89.2	.602	59.98	82.13	4.575	.904	3.271	180.
	146.	6.4946	97.9	.580	61.40	84.13	4.589	.890	3.004	182.
	148.	6.9485	121.6	.525	65.23	89.55	4.626	.855	2.476	188.
	150.	7.3397	141.8	.485	68.49	94.18	4.657	.830	2.172	193.
	152.	7.6915	159.6	.454	71.39	98.31	4.684	.810	1.971	197.
	154.	8.0158	175.8	.428	74.04	102.10	4.709	.793	1.826	201.
	156.	8.3197	190.7	.407	76.52	105.64	4.732	.780	1.716	205.
	158.	8.6075	204.7	.388	78.85	108.98	4.753	.768	1.630	208.
	160.	8.8824	218.0	.372	81.08	112.17	4.773	.759	1.560	212.
	165.	9.5267	248.4	.339	86.28	119.62	4.819	.739	1.431	219.
	170.	10.1256	276.0	.313	91.10	126.54	4.861	.725	1.343	226.
	175.	10.6919	301.6	.292	95.67	133.09	4.898	.715	1.279	232.
	180.	11.2335	325.7	.274	100.05	139.36	4.934	.707	1.231	238.
	185.	11.7555	348.5	.259	104.27	145.42	4.967	.700	1.192	244.
	190.	12.2617	370.4	.246	108.38	151.30	4.998	.695	1.161	249.
	195.	12.7548	391.4	.234	112.39	157.04	5.028	.690	1.136	254.
	200.	13.2368	411.8	.224	116.33	162.66	5.057	.686	1.114	259.
	210.	14.1738	450.7	.207	124.01	173.62	5.110	.680	1.080	268.
	220.	15.0823	487.8	.192	131.50	184.29	5.160	.676	1.055	276.
	230.	15.9684	523.4	.180	138.85	194.74	5.206	.672	1.035	284.
	240.	16.8367	557.9	.169	146.08	205.00	5.250	.669	1.019	291.
	250.	17.6906	591.4	.160	153.21	215.13	5.291	.667	1.007	299.
	260.	18.5325	624.1	.152	160.28	225.15	5.331	.666	.997	306.
	270.	19.3645	656.2	.145	167.29	235.07	5.368	.665	.988	312.
	280.	20.1881	687.7	.138	174.26	244.92	5.404	.664	.982	319.
	290.	21.0046	718.8	.132	181.19	254.71	5.438	.664	.976	325.
	300.	21.8149	749.4	.127	188.10	264.45	5.471	.664	.972	331.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

40. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 54.817	.7638	8844.4	39.74	-193.23	-190.17	2.101	1.092	1.663	1161.
56.	.7669	8699.5	38.91	-191.27	-188.21	2.136	1.089	1.662	1152.
58.	.7722	8455.9	37.58	-187.97	-184.88	2.195	1.084	1.662	1139.
60.	.7775	8213.9	36.35	-184.67	-181.56	2.251	1.078	1.661	1125.
62.	.7829	7973.3	35.18	-181.37	-178.24	2.305	1.070	1.660	1112.
64.	.7883	7734.2	34.08	-178.07	-174.92	2.358	1.062	1.660	1099.
66.	.7938	7496.4	33.04	-174.78	-171.60	2.409	1.054	1.660	1086.
68.	.7994	7260.1	32.04	-171.48	-168.28	2.459	1.045	1.660	1074.
70.	.8051	7025.3	31.08	-168.18	-164.96	2.507	1.036	1.660	1061.
72.	.8109	6792.0	30.16	-164.89	-161.64	2.554	1.026	1.660	1048.
74.	.8168	6560.4	29.27	-161.59	-158.32	2.599	1.016	1.661	1035.
76.	.8228	6330.6	28.40	-158.29	-155.00	2.643	1.006	1.661	1023.
78.	.8290	6102.8	27.56	-154.99	-151.68	2.686	.995	1.662	1010.
80.	.8352	5877.0	26.74	-151.69	-148.35	2.729	.985	1.664	996.
82.	.8417	5653.6	25.93	-148.39	-145.02	2.770	.974	1.665	983.
84.	.8482	5432.5	25.15	-145.08	-141.69	2.810	.964	1.667	969.
86.	.8550	5214.1	24.38	-141.77	-138.35	2.849	.953	1.670	956.
88.	.8619	4998.4	23.62	-138.45	-135.00	2.888	.943	1.673	942.
90.	.8690	4785.8	22.88	-135.13	-131.66	2.925	.933	1.676	927.
92.	.8764	4576.3	22.14	-131.80	-128.30	2.962	.923	1.680	913.
94.	.8839	4370.1	21.42	-128.47	-124.93	2.998	.913	1.684	898.
96.	.8917	4167.4	20.71	-125.13	-121.56	3.034	.904	1.689	882.
98.	.8997	3968.5	20.01	-121.77	-118.17	3.069	.895	1.695	867.
100.	.9080	3773.5	19.31	-118.41	-114.78	3.103	.887	1.702	851.
102.	.9166	3582.4	18.63	-115.03	-111.37	3.137	.880	1.710	834.
104.	.9255	3395.6	17.95	-111.64	-107.94	3.170	.873	1.719	817.
106.	.9347	3213.2	17.28	-108.23	-104.49	3.203	.867	1.728	800.
108.	.9443	3035.2	16.62	-104.80	-101.02	3.235	.862	1.739	782.
110.	.9543	2861.7	15.97	-101.35	-97.53	3.267	.858	1.751	764.
112.	.9646	2692.9	15.33	-97.88	-94.02	3.299	.856	1.766	745.
114.	.9755	2528.7	14.71	-94.37	-90.47	3.330	.854	1.781	726.
116.	.9868	2369.2	14.09	-90.84	-86.89	3.362	.853	1.799	707.
118.	.9986	2214.2	13.49	-87.27	-83.27	3.392	.852	1.819	688.
120.	1.0111	2063.5	12.90	-83.66	-79.61	3.423	.852	1.842	668.
122.	1.0242	1917.0	12.34	-80.00	-75.90	3.454	.851	1.867	649.
124.	1.0382	1774.2	11.79	-76.29	-72.14	3.484	.848	1.895	630.
126.	1.0529	1634.6	11.26	-72.53	-68.31	3.515	.841	1.926	612.
128.	1.0688	1497.5	10.77	-68.70	-64.42	3.546	.828	1.960	595.
130.	1.0862	1368.3	10.24	-64.76	-60.41	3.577	.832	2.007	574.
132.	1.1049	1232.3	9.76	-60.73	-56.31	3.608	.830	2.076	555.
134.	1.1252	1096.8	9.25	-56.58	-52.08	3.640	.823	2.147	535.
136.	1.1477	965.9	8.68	-52.31	-47.72	3.672	.819	2.216	511.
138.	1.1729	835.9	8.10	-47.88	-43.19	3.705	.813	2.310	486.
140.	1.2013	707.5	7.53	-43.28	-38.47	3.739	.819	2.439	459.
142.	1.2345	583.6	6.92	-38.39	-33.45	3.775	.821	2.598	430.
144.	1.2743	460.3	6.29	-33.15	-28.05	3.813	.829	2.836	397.
146.	1.3248	337.0	5.61	-27.33	-22.03	3.854	.845	3.235	359.
148.	1.3957	210.1	4.84	-20.47	-14.88	3.903	.873	4.093	314.
* 148.658	1.4280	170.0	4.66	-17.77	-12.05	3.922	.887	4.762	302.
* 148.658	5.1333	60.7	.781	55.47	76.01	4.514	.947	4.880	177.
150.	5.5244	83.5	.702	59.47	81.57	4.552	.907	3.605	182.
152.	5.9773	110.0	.626	63.96	87.87	4.593	.867	2.804	189.
154.	6.3542	131.8	.574	67.61	93.03	4.627	.839	2.392	194.
156.	6.6870	150.8	.534	70.79	97.54	4.656	.817	2.134	198.
158.	6.9904	168.0	.501	73.65	101.62	4.682	.800	1.955	203.
160.	7.2724	183.8	.475	76.30	105.39	4.706	.785	1.822	207.
165.	7.9127	219.1	.423	82.25	113.90	4.758	.758	1.633	215.
170.	8.4908	250.2	.385	87.59	121.55	4.804	.74	1.487	223.
175.	9.0274	278.5	.356	92.53	128.64	4.845	.726	1.374	230.
180.	9.5341	304.8	.332	97.19	135.33	4.883	.716	1.306	236.
185.	10.0181	329.5	.311	101.65	141.72	4.918	.708	1.254	242.
190.	10.4840	352.9	.294	105.95	147.89	4.951	.701	1.214	247.
195.	10.9353	375.3	.279	110.13	153.87	4.982	.696	1.181	252.
200.	11.3745	396.9	.266	114.21	159.70	5.011	.692	1.153	257.
210.	12.2237	437.9	.244	122.12	171.01	5.066	.684	1.111	267.
220.	13.0424	476.7	.226	129.79	181.96	5.117	.679	1.080	275.
230.	13.8377	513.7	.211	137.28	192.63	5.165	.675	1.056	283.
240.	14.6145	549.4	.198	144.63	203.09	5.209	.672	1.037	291.
250.	15.3763	584.0	.187	151.87	213.38	5.251	.669	1.022	299.
260.	16.1259	617.7	.177	159.03	223.53	5.291	.668	1.010	306.
270.	16.8654	650.6	.168	166.12	233.58	5.329	.666	1.000	312.
280.	17.5963	682.9	.160	173.15	243.54	5.365	.665	.992	319.
290.	18.3200	714.6	.153	180.14	253.42	5.400	.665	.985	325.
300.	19.0374	745.9	.147	187.09	263.24	5.433	.665	.980	332.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

45. BAR ISOBAR

	TEMPERATURE K	VOLUME CM^3/G	ISOTHERM OERIVATIVE BAR-CM^3/G	ISOCHORE OERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
*	54.675	.7636	8862.6	39.74	-193.20	-189.77	2.101	1.093	1.663	1161.
	56.	.7666	8725.0	38.95	-191.35	-187.90	2.135	1.090	1.662	1153.
	58.	.7718	8481.9	37.63	-188.05	-184.57	2.193	1.085	1.661	1140.
	60.	.7771	8240.3	36.39	-184.75	-181.25	2.250	1.079	1.660	1127.
	62.	.7825	8000.3	35.23	-181.45	-177.93	2.304	1.071	1.660	1114.
	64.	.7879	7761.7	34.13	-178.16	-174.61	2.357	1.063	1.659	1101.
	66.	.7934	7524.5	33.08	-174.87	-171.30	2.408	1.055	1.659	1088.
	68.	.7990	7288.6	32.09	-171.57	-167.98	2.457	1.046	1.659	1075.
	70.	.8047	7054.3	31.13	-168.28	-164.66	2.505	1.036	1.659	1063.
	72.	.8104	6821.6	30.20	-164.99	-161.34	2.552	1.027	1.659	1050.
	74.	.8163	6590.5	29.31	-161.70	-158.02	2.598	1.017	1.659	1037.
	76.	.8223	6361.3	28.45	-158.40	-154.70	2.642	1.008	1.660	1024.
	78.	.8284	6134.0	27.60	-155.11	-151.38	2.685	.996	1.661	1011.
	80.	.8346	5908.8	26.78	-151.81	-148.06	2.727	.986	1.662	998.
	82.	.8410	5685.9	25.98	-148.52	-144.73	2.768	.975	1.664	985.
	84.	.8476	5465.5	25.20	-145.22	-141.40	2.808	.965	1.666	971.
	86.	.8543	5247.6	24.43	-141.91	-138.07	2.847	.954	1.668	958.
	88.	.8612	5032.6	23.67	-138.60	-134.73	2.886	.944	1.671	944.
	90.	.8682	4820.5	22.93	-135.29	-131.38	2.923	.934	1.674	930.
	92.	.8755	4611.7	22.20	-131.97	-128.03	2.960	.924	1.677	915.
	94.	.8830	4406.1	21.48	-128.65	-124.67	2.996	.914	1.682	900.
	96.	.8907	4204.1	20.77	-125.31	-121.30	3.032	.905	1.687	885.
	98.	.8987	4005.8	20.07	-121.97	-117.92	3.067	.895	1.692	870.
	100.	.9069	3811.4	19.38	-118.61	-114.53	3.101	.888	1.698	854.
	102.	.9154	3621.1	16.70	-115.25	-111.13	3.135	.881	1.706	837.
	104.	.9242	3435.0	18.02	-111.87	-107.71	3.168	.874	1.714	821.
	106.	.9334	3253.2	17.36	-108.47	-104.27	3.201	.868	1.723	804.
	108.	.9428	3075.9	16.70	-105.06	-100.81	3.233	.863	1.734	786.
	110.	.9527	2903.1	16.05	-101.62	-97.34	3.265	.859	1.746	768.
	112.	.9629	2735.0	15.42	-98.16	-93.83	3.296	.857	1.759	750.
	114.	.9736	2571.6	14.80	-94.68	-90.30	3.328	.855	1.775	731.
	116.	.9848	2412.7	14.18	-91.16	-86.73	3.359	.853	1.792	712.
	118.	.9964	2258.4	13.59	-87.61	-83.13	3.389	.853	1.811	692.
	120.	1.0087	2108.4	13.01	-84.02	-79.49	3.420	.852	1.832	673.
	122.	1.0216	1962.6	12.44	-80.39	-75.80	3.451	.851	1.855	654.
	124.	1.0352	1820.4	11.90	-76.72	-72.06	3.481	.848	1.881	636.
	126.	1.0496	1681.5	11.38	-72.99	-68.26	3.511	.841	1.910	618.
	128.	1.0650	1545.2	10.88	-69.20	-64.41	3.542	.828	1.941	602.
	130.	1.0820	1415.3	10.37	-65.30	-60.44	3.572	.832	1.988	582.
	132.	1.1000	1280.9	9.87	-61.34	-56.39	3.603	.830	2.044	562.
	134.	1.1196	1147.3	9.40	-57.26	-52.22	3.635	.824	2.117	543.
	136.	1.1411	1019.3	8.84	-53.07	-47.93	3.666	.813	2.177	521.
	138.	1.1650	891.7	8.28	-48.74	-43.50	3.699	.817	2.258	496.
	140.	1.1916	767.4	7.73	-44.27	-38.91	3.732	.817	2.365	471.
	142.	1.2222	647.2	7.15	-39.56	-34.06	3.766	.813	2.495	444.
	144.	1.2581	529.3	6.55	-34.58	-28.91	3.802	.823	2.672	415.
	146.	1.3018	411.8	5.93	-29.17	-23.31	3.841	.834	2.944	381.
	148.	1.3581	295.4	5.26	-23.12	-17.01	3.884	.851	3.408	344.
	150.	1.4399	177.0	4.49	-15.83	-9.35	3.935	.881	4.428	298.
*	151.646	1.5666	70.9	3.68	-7.20	-.15	3.996	.939	8.058	247.
*	151.646	4.0754	31.2	1.03	48.56	66.90	4.438	1.010	9.586	172.
	152.	4.2555	42.4	.983	50.87	70.02	4.459	.986	7.262	177.
	154.	4.8642	77.9	.812	58.34	80.23	4.526	.912	4.000	185.
	156.	5.2954	105.1	.720	63.28	87.11	4.570	.870	3.025	191.
	158.	5.6492	127.5	.656	67.22	92.64	4.605	.841	2.545	196.
	160.	5.9594	147.1	.609	70.60	97.41	4.635	.819	2.251	201.
	165.	6.6254	188.7	.526	77.71	107.52	4.698	.781	1.842	211.
	170.	7.2004	224.0	.470	83.74	116.14	4.749	.756	1.625	219.
	175.	7.7210	255.3	.428	89.16	123.90	4.794	.739	1.488	227.
	180.	8.2049	283.9	.396	94.17	131.09	4.835	.726	1.394	234.
	185.	8.6619	310.6	.369	98.90	137.88	4.872	.716	1.325	240.
	190.	9.0983	335.6	.347	103.43	144.37	4.906	.703	1.272	246.
	195.	9.5184	359.5	.328	107.79	150.62	4.939	.702	1.230	251.
	200.	9.9252	382.2	.311	112.02	156.68	4.970	.697	1.196	256.
	210.	10.7073	425.3	.284	120.18	168.36	5.027	.689	1.144	266.
	220.	11.4569	465.8	.261	128.05	179.60	5.079	.683	1.106	275.
	230.	12.1818	504.4	.243	135.69	190.51	5.127	.678	1.077	283.
	240.	12.8876	541.3	.227	143.17	201.17	5.173	.674	1.055	291.
	250.	13.5780	577.0	.214	150.52	211.62	5.215	.671	1.037	299.
	260.	14.2558	611.6	.202	157.77	221.92	5.256	.669	1.023	306.
	270.	14.9233	645.3	.192	164.94	232.09	5.294	.668	1.011	313.
	280.	15.5821	678.4	.183	172.04	242.16	5.331	.666	1.002	319.
	290.	16.2335	710.8	.175	179.08	252.14	5.366	.666	.994	326.
	300.	16.8787	742.7	.167	186.09	262.05	5.399	.665	.988	332.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

50. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM OERIVATIVE BAR-CM^3/G	ISOCHORE OERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 54.932	.7634	8880.7	39.75	-193.18	-189.36	2.102	1.093	1.663	1162.
56.	.7662	8750.4	39.00	-191.42	-187.59	2.134	1.091	1.662	1155.
58.	.7715	8507.8	37.67	-188.12	-184.26	2.192	1.085	1.661	1141.
60.	.7768	8266.8	36.43	-184.83	-180.94	2.248	1.079	1.660	1128.
62.	.7821	8027.2	35.27	-181.54	-177.63	2.303	1.072	1.659	1115.
64.	.7875	7789.1	34.17	-178.24	-174.31	2.355	1.064	1.659	1102.
66.	.7930	7552.4	33.13	-174.96	-170.99	2.406	1.055	1.658	1089.
68.	.7986	7317.1	32.13	-171.67	-167.67	2.456	1.046	1.658	1077.
70.	.8042	7083.3	31.17	-168.38	-164.36	2.504	1.037	1.658	1064.
72.	.8100	6851.1	30.25	-165.09	-161.04	2.551	1.027	1.658	1052.
74.	.8158	6620.6	29.36	-161.80	-157.72	2.596	1.017	1.658	1039.
76.	.8218	6391.9	28.49	-158.52	-154.41	2.640	1.007	1.659	1026.
78.	.8278	6165.1	27.65	-155.23	-151.09	2.683	.997	1.660	1013.
80.	.8341	5940.5	26.83	-151.94	-147.77	2.725	.986	1.661	1000.
82.	.8404	5718.2	26.03	-148.65	-144.44	2.766	.976	1.662	987.
84.	.8469	5498.3	25.25	-145.35	-141.12	2.807	.965	1.664	974.
86.	.8536	5281.1	24.48	-142.05	-137.79	2.846	.955	1.666	960.
88.	.8604	5066.6	23.73	-138.75	-134.45	2.884	.945	1.669	946.
90.	.8675	4855.2	22.99	-135.45	-131.11	2.922	.934	1.672	932.
92.	.8747	4646.9	22.26	-132.14	-127.76	2.958	.925	1.675	918.
94.	.8821	4442.0	21.54	-128.82	-124.41	2.994	.915	1.679	903.
96.	.8898	4240.6	20.83	-125.49	-121.05	3.030	.906	1.684	888.
98.	.8977	4043.0	20.13	-122.16	-117.67	3.065	.897	1.689	872.
100.	.9059	3849.2	19.44	-118.82	-114.29	3.099	.889	1.695	857.
102.	.9143	3659.5	18.76	-115.46	-110.89	3.132	.882	1.702	840.
104.	.9230	3474.1	18.09	-112.09	-107.48	3.166	.875	1.710	824.
106.	.9320	3293.0	17.43	-108.71	-104.05	3.198	.869	1.719	807.
108.	.9414	3116.3	16.78	-105.31	-100.60	3.230	.864	1.729	790.
110.	.9511	2944.2	16.14	-101.89	-97.13	3.262	.860	1.740	772.
112.	.9612	2776.8	15.50	-98.45	-93.64	3.294	.859	1.753	753.
114.	.9718	2614.0	14.88	-94.98	-90.12	3.325	.856	1.768	735.
116.	.9828	2455.8	14.28	-91.48	-86.57	3.356	.854	1.784	716.
118.	.9942	2302.1	13.68	-87.95	-82.98	3.386	.854	1.802	697.
120.	1.0063	2152.8	13.10	-84.39	-79.36	3.417	.853	1.822	678.
122.	1.0189	2007.6	12.55	-80.78	-75.69	3.447	.852	1.845	659.
124.	1.0323	1866.2	12.01	-77.13	-71.97	3.477	.848	1.869	641.
126.	1.0464	1728.0	11.49	-73.44	-68.20	3.508	.841	1.895	624.
128.	1.0614	1592.3	11.00	-69.69	-64.38	3.538	.827	1.923	608.
130.	1.0779	1461.8	10.50	-65.83	-60.45	3.568	.831	1.969	539.
132.	1.0954	1328.8	9.97	-61.92	-56.44	3.599	.830	2.016	568.
134.	1.1143	1197.1	9.53	-57.91	-52.33	3.630	.825	2.088	550.
136.	1.1349	1071.5	8.99	-53.79	-48.12	3.661	.819	2.142	529.
138.	1.1576	946.0	8.45	-49.56	-43.77	3.693	.817	2.213	506.
140.	1.1827	825.0	7.91	-45.20	-39.28	3.725	.816	2.302	482.
142.	1.2113	707.6	7.36	-40.63	-34.58	3.758	.816	2.410	457.
144.	1.2441	593.5	6.79	-35.85	-29.63	3.793	.814	2.550	430.
146.	1.2830	480.0	6.21	-30.74	-24.32	3.829	.826	2.754	400.
148.	1.3308	369.3	5.59	-25.18	-18.52	3.869	.834	3.060	367.
150.	1.3937	259.8	4.94	-18.88	-11.91	3.913	.856	3.592	330.
152.	1.4883	149.9	4.17	-11.13	-3.69	3.968	.889	4.797	284.
154.	1.7157	33.0	3.01	1.87	10.45	4.060	.930	13.412	212.
* 154.362	1.9432	2.9	2.48	10.48	20.19	4.123	1.102	125.346	181.
* 154.362	2.7893	2.1	1.61	31.86	45.80	4.289	1.141	149.806	166.
156.	3.9252	50.4	1.06	51.15	70.77	4.450	.963	6.373	182.
158.	4.4399	82.2	.898	58.33	80.53	4.513	.904	3.958	190.
160.	4.8215	106.9	.799	63.33	87.43	4.556	.865	3.047	195.
165.	5.5583	157.2	.655	72.45	100.24	4.635	.807	2.199	207.
170.	6.1483	197.3	.570	79.48	110.22	4.695	.774	1.834	216.
175.	6.6643	232.0	.512	85.52	118.84	4.745	.752	1.630	224.
180.	7.1344	263.2	.468	90.96	126.64	4.789	.736	1.499	231.
185.	7.5726	291.9	.433	96.02	133.88	4.828	.724	1.406	238.
190.	7.9873	318.6	.404	100.80	140.73	4.865	.715	1.337	244.
195.	8.3836	343.9	.380	105.36	147.28	4.899	.708	1.284	250.
200.	8.7653	367.9	.359	109.76	153.59	4.931	.702	1.242	255.
210.	9.4946	413.1	.326	118.20	165.67	4.990	.693	1.178	265.
220.	10.1895	455.4	.299	126.27	177.22	5.043	.686	1.133	274.
230.	10.8585	495.3	.277	134.08	188.38	5.093	.681	1.100	283.
240.	11.5076	533.5	.258	141.70	199.24	5.139	.677	1.074	291.
250.	12.1409	570.2	.242	149.16	209.87	5.183	.673	1.053	299.
260.	12.7613	605.7	.229	156.50	220.31	5.224	.671	1.036	306.
270.	13.3711	640.3	.217	163.75	230.61	5.262	.669	1.023	313.
280.	13.9722	674.1	.206	170.92	240.78	5.299	.667	1.012	320.
290.	14.5659	707.1	.197	178.03	250.86	5.335	.666	1.003	326.
300.	15.1532	739.6	.188	185.09	260.85	5.369	.666	.996	333.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

55. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 54.989	.7633	8898.9	39.75	-193.10	-188.96	2.102	1.094	1.662	1163.
56.	.7659	8775.8	39.04	-191.49	-187.28	2.132	1.091	1.662	1156.
58.	.7711	8533.7	37.71	-188.20	-183.96	2.191	1.086	1.661	1142.
60.	.7764	8293.1	36.48	-184.91	-180.64	2.247	1.079	1.660	1129.
62.	.7817	8054.1	35.31	-181.62	-177.32	2.301	1.072	1.659	1116.
64.	.7871	7816.5	34.22	-178.33	-174.00	2.354	1.064	1.658	1104.
66.	.7926	7580.3	33.17	-175.04	-170.68	2.405	1.056	1.658	1091.
68.	.7981	7345.5	32.17	-171.76	-167.37	2.454	1.047	1.657	1078.
70.	.8038	7112.2	31.22	-168.48	-164.06	2.502	1.037	1.657	1066.
72.	.8095	6880.5	30.30	-165.19	-160.74	2.549	1.028	1.657	1053.
74.	.8153	6650.5	29.40	-161.91	-157.43	2.595	1.018	1.657	1041.
76.	.8212	6422.4	28.54	-158.63	-154.11	2.639	1.008	1.658	1028.
78.	.8273	6196.2	27.70	-155.34	-150.79	2.682	.997	1.658	1015.
80.	.8335	5972.1	26.88	-152.06	-147.48	2.724	.987	1.659	1002.
82.	.8398	5750.3	26.08	-148.77	-144.15	2.765	.977	1.661	989.
84.	.8463	5531.0	25.30	-145.49	-140.83	2.805	.966	1.662	976.
86.	.8529	5314.3	24.53	-142.19	-137.50	2.844	.956	1.664	962.
88.	.8597	5100.5	23.78	-138.90	-134.17	2.882	.945	1.667	948.
90.	.8667	4889.6	23.04	-135.60	-130.84	2.920	.935	1.669	934.
92.	.8739	4681.9	22.32	-132.30	-127.49	2.957	.925	1.673	920.
94.	.8813	4477.6	21.60	-128.99	-124.14	2.993	.916	1.676	905.
96.	.8889	4276.9	20.89	-125.68	-120.79	3.028	.907	1.681	890.
98.	.8967	4079.9	20.20	-122.35	-117.42	3.063	.898	1.686	875.
100.	.9048	3886.8	19.51	-119.02	-114.04	3.097	.891	1.692	860.
102.	.9131	3697.7	18.83	-115.67	-110.65	3.130	.883	1.698	844.
104.	.9218	3512.9	18.16	-112.32	-107.25	3.163	.875	1.706	827.
106.	.9307	3332.4	17.50	-108.95	-103.83	3.196	.870	1.714	810.
108.	.9400	3156.4	16.85	-105.56	-100.39	3.228	.865	1.724	793.
110.	.9496	2985.0	16.22	-102.15	-96.93	3.260	.862	1.735	775.
112.	.9596	2818.2	15.59	-98.72	-93.45	3.291	.859	1.748	757.
114.	.9700	2656.0	14.97	-95.27	-89.94	3.322	.857	1.762	739.
116.	.9808	2498.5	14.37	-91.79	-86.40	3.353	.855	1.777	720.
118.	.9921	2345.5	13.78	-88.28	-82.83	3.384	.855	1.794	702.
120.	1.0040	2196.8	13.20	-84.74	-79.22	3.414	.854	1.813	683.
122.	1.0164	2052.2	12.65	-81.16	-75.57	3.444	.852	1.834	665.
124.	1.0294	1911.4	12.11	-77.54	-71.88	3.474	.849	1.857	647.
126.	1.0433	1773.8	11.60	-73.87	-68.13	3.504	.841	1.881	630.
128.	1.0580	1638.9	11.11	-70.16	-64.34	3.534	.837	1.906	614.
130.	1.0740	1507.9	10.62	-66.35	-60.44	3.564	.831	1.953	595.
132.	1.0910	1376.2	10.11	-62.48	-56.46	3.594	.829	1.995	575.
134.	1.1092	1246.1	9.65	-58.53	-52.43	3.625	.826	2.058	557.
136.	1.1291	1122.5	9.14	-54.48	-48.27	3.656	.820	2.109	537.
138.	1.1508	998.9	8.61	-50.33	-44.00	3.687	.816	2.173	516.
140.	1.1746	880.7	8.08	-46.07	-39.61	3.718	.815	2.248	493.
142.	1.2014	765.6	7.55	-41.63	-35.02	3.751	.815	2.340	469.
144.	1.2318	654.1	7.01	-37.00	-30.23	3.784	.816	2.455	444.
146.	1.2671	543.5	6.45	-32.12	-25.16	3.819	.820	2.615	416.
148.	1.3092	436.5	5.88	-26.90	-19.70	3.857	.829	2.839	387.
150.	1.3615	331.9	5.29	-21.17	-13.68	3.897	.841	3.182	354.
152.	1.4316	229.3	4.64	-14.62	-6.75	3.943	.860	3.782	318.
154.	1.5389	130.1	3.89	-6.50	1.97	4.000	.894	5.135	273.
156.	1.7898	35.7	2.82	6.80	16.65	4.094	.990	12.153	209.
158.	3.1143	29.9	1.41	41.80	58.93	4.364	1.029	11.239	181.
160.	3.7493	64.3	1.11	52.86	73.48	4.456	.937	5.212	189.
165.	4.6398	124.8	.825	66.15	91.66	4.568	.841	2.777	203.
170.	5.2665	170.6	.692	74.69	103.66	4.639	.794	2.119	213.
175.	5.7886	209.0	.609	81.56	113.40	4.696	.766	1.807	222.
180.	6.2523	242.8	.549	87.54	121.93	4.744	.747	1.622	230.
185.	6.6779	273.6	.504	92.95	129.71	4.787	.733	1.498	236.
190.	7.0763	302.0	.467	98.05	136.97	4.825	.722	1.410	243.
195.	7.4543	328.8	.437	102.85	143.85	4.861	.714	1.344	249.
200.	7.8162	354.1	.411	107.44	150.43	4.894	.707	1.292	254.
210.	8.5032	401.3	.370	116.18	162.94	4.955	.697	1.215	265.
220.	9.1537	445.2	.338	124.47	174.82	5.011	.690	1.162	274.
230.	9.7772	486.6	.312	132.46	186.23	5.061	.684	1.123	283.
240.	10.3800	525.9	.290	140.21	197.30	5.108	.679	1.093	291.
250.	10.9665	563.7	.272	147.79	208.11	5.153	.676	1.069	299.
260.	11.5400	600.2	.256	155.23	218.70	5.194	.673	1.050	306.
270.	12.1027	635.5	.242	162.56	229.12	5.233	.670	1.035	313.
280.	12.6565	670.0	.230	169.80	239.41	5.271	.668	1.023	320.
290.	13.2028	703.8	.219	176.97	249.58	5.307	.667	1.012	327.
300.	13.7428	736.9	.210	184.08	259.66	5.341	.666	1.004	333.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

60. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	Cv J/G-K	Cp J/G-K	VELOCITY OF SOUND M/S
* 55.046	.7631	8917.1	39.75	-193.13	-188.55	2.102	1.094	1.662	1164.
56.	.7656	8801.1	39.08	-191.56	-186.97	2.131	1.092	1.662	1157.
58.	.7708	8559.5	37.76	-188.27	-183.65	2.189	1.086	1.660	1144.
60.	.7760	8319.5	36.52	-184.98	-180.33	2.246	1.080	1.659	1131.
62.	.7814	8080.9	35.36	-181.70	-177.01	2.300	1.073	1.658	1118.
64.	.7867	7843.8	34.26	-178.41	-173.69	2.353	1.065	1.658	1105.
66.	.7922	7608.1	33.22	-175.13	-170.38	2.404	1.056	1.657	1092.
68.	.7977	7373.8	32.22	-171.85	-167.07	2.453	1.047	1.657	1080.
70.	.8033	7141.0	31.26	-168.57	-163.75	2.501	1.038	1.656	1067.
72.	.8090	6909.9	30.34	-165.29	-160.44	2.548	1.028	1.656	1055.
74.	.8148	6680.4	29.45	-162.02	-157.13	2.593	1.018	1.656	1042.
76.	.8207	6452.8	28.59	-158.74	-153.81	2.637	1.008	1.657	1030.
78.	.8267	6227.1	27.75	-155.46	-150.50	2.680	.998	1.657	1017.
80.	.8329	6003.6	26.93	-152.18	-147.18	2.722	.988	1.658	1004.
82.	.8392	5782.4	26.13	-148.90	-143.87	2.763	.977	1.659	991.
84.	.8456	5563.6	25.35	-145.62	-140.55	2.803	.967	1.661	978.
86.	.8522	5347.5	24.59	-142.34	-137.22	2.842	.956	1.662	964.
88.	.8590	5134.2	23.84	-139.05	-133.89	2.881	.946	1.665	950.
90.	.8659	4923.9	23.10	-135.76	-130.56	2.918	.936	1.667	936.
92.	.8731	4716.9	22.37	-132.46	-127.22	2.955	.926	1.670	922.
94.	.8804	4513.1	21.66	-129.16	-123.88	2.991	.917	1.674	908.
96.	.8879	4313.0	20.95	-125.85	-120.53	3.026	.908	1.678	893.
98.	.8957	4116.6	20.26	-122.54	-117.17	3.061	.899	1.683	878.
100.	.9037	3924.1	19.57	-119.22	-113.79	3.095	.891	1.688	862.
102.	.9120	3735.7	18.90	-115.88	-110.41	3.128	.884	1.695	846.
104.	.9206	3551.5	18.23	-112.54	-107.01	3.161	.877	1.702	830.
106.	.9294	3371.6	17.58	-109.18	-103.60	3.194	.871	1.710	814.
108.	.9386	3196.3	16.93	-105.80	-100.17	3.226	.866	1.720	796.
110.	.9481	3025.5	16.29	-102.41	-96.72	3.257	.863	1.730	779.
112.	.9580	2859.3	15.67	-99.00	-93.25	3.289	.860	1.742	761.
114.	.9682	2697.8	15.05	-95.56	-89.75	3.320	.858	1.755	743.
116.	.9789	2540.8	14.45	-92.10	-86.23	3.350	.856	1.770	725.
118.	.9901	2388.4	13.87	-88.61	-82.67	3.381	.856	1.787	706.
120.	1.0017	2240.3	13.30	-85.09	-79.08	3.411	.855	1.805	688.
122.	1.0139	2096.4	12.74	-81.53	-75.45	3.441	.853	1.825	670.
124.	1.0267	1956.2	12.21	-77.93	-71.77	3.471	.849	1.846	652.
126.	1.0402	1819.2	11.70	-74.30	-68.06	3.500	.842	1.868	635.
128.	1.0546	1684.9	11.22	-70.62	-64.29	3.530	.827	1.890	620.
130.	1.0703	1553.5	10.74	-66.85	-60.43	3.560	.830	1.937	602.
132.	1.0868	1423.0	10.23	-63.02	-56.50	3.590	.823	1.977	582.
134.	1.1044	1294.5	9.76	-59.13	-52.50	3.620	.826	2.030	564.
136.	1.1235	1172.6	9.27	-55.14	-48.40	3.651	.820	2.079	545.
138.	1.1443	1050.6	8.76	-51.06	-44.19	3.681	.816	2.136	524.
140.	1.1670	934.7	8.25	-46.89	-39.88	3.712	.814	2.203	503.
142.	1.1924	821.4	7.73	-42.55	-35.40	3.744	.814	2.282	480.
144.	1.2208	712.0	7.20	-38.07	-30.74	3.777	.814	2.378	456.
146.	1.2533	603.6	6.67	-33.37	-25.85	3.810	.81	2.504	431.
148.	1.2911	499.3	6.14	-28.40	-20.66	3.846	.822	2.682	404.
150.	1.3365	397.8	5.58	-23.06	-15.04	3.883	.831	2.929	374.
152.	1.3937	299.4	5.00	-17.18	-8.82	3.925	.843	3.307	343.
154.	1.4707	205.8	4.37	-10.43	-1.61	3.972	.862	3.954	307.
156.	1.5889	119.1	3.65	-2.08	7.46	4.030	.896	5.311	266.
158.	1.8372	45.4	2.74	10.56	21.59	4.120	.972	3.802	214.
160.	2.5716	27.4	1.76	33.41	48.84	4.292	1.042	13.003	185.
165.	3.8194	93.0	1.06	58.24	81.16	4.491	.884	3.779	199.
170.	4.5092	144.2	.843	69.22	96.27	4.581	.819	2.521	211.
175.	5.3485	186.5	.723	77.23	107.52	4.647	.782	2.039	220.
180.	5.5118	223.0	.642	83.89	116.96	4.700	.758	1.769	228.
185.	5.9294	255.8	.583	89.79	125.36	4.746	.742	1.605	235.
190.	6.3159	286.0	.536	95.19	133.09	4.787	.730	1.492	242.
195.	6.6795	314.1	.499	100.25	140.33	4.825	.720	1.409	248.
200.	7.0256	340.7	.467	105.06	147.21	4.860	.713	1.345	254.
210.	7.6781	390.0	.417	114.11	160.18	4.923	.701	1.254	264.
220.	8.2918	435.5	.379	122.64	172.39	4.980	.693	1.192	274.
230.	8.8775	478.3	.348	130.81	184.07	5.032	.687	1.147	283.
240.	9.4418	518.8	.323	138.71	195.36	5.080	.682	1.112	291.
250.	9.9894	557.5	.302	146.41	206.34	5.125	.678	1.086	299.
260.	10.5237	594.9	.284	153.95	217.09	5.167	.674	1.064	306.
270.	11.0471	631.1	.268	161.36	227.64	5.207	.672	1.047	314.
280.	11.5614	666.2	.254	168.67	238.04	5.244	.670	1.033	321.
290.	12.0682	700.6	.242	175.90	248.31	5.280	.668	1.022	327.
300.	12.5687	734.3	.231	183.07	258.48	5.315	.667	1.012	334.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

65. BAR ISOBAR

TEMPERATURE K	VOLUME CM3/G	ISOTHERM DERIVATIVE BAR-CM3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 55.103	.7629	8935.2	39.75	-193.11	-188.15	2.103	1.095	1.662	1165.
56.	.7652	8826.4	39.13	-191.63	-186.66	2.130	1.093	1.661	1158.
58.	.7704	8585.2	37.80	-188.34	-183.34	2.188	1.087	1.660	1145.
60.	.7757	8345.7	36.56	-185.06	-180.02	2.244	1.081	1.659	1132.
62.	.7810	8107.7	35.40	-181.78	-176.70	2.299	1.073	1.658	1119.
64.	.7863	7871.0	34.30	-178.50	-173.39	2.351	1.065	1.657	1106.
66.	.7918	7635.8	33.26	-175.22	-170.07	2.402	1.057	1.656	1094.
68.	.7973	7402.0	32.26	-171.94	-166.76	2.452	1.048	1.656	1081.
70.	.8029	7169.8	31.31	-168.67	-163.45	2.500	1.039	1.655	1069.
72.	.8085	6939.1	30.39	-165.39	-160.14	2.546	1.029	1.655	1057.
74.	.8143	6710.2	29.50	-162.12	-156.83	2.592	1.019	1.655	1044.
76.	.8202	6483.1	28.63	-158.85	-153.52	2.636	1.009	1.656	1031.
78.	.8262	6257.9	27.80	-155.57	-150.20	2.679	.999	1.656	1019.
80.	.8323	6034.9	26.98	-152.30	-146.89	2.721	.988	1.657	1006.
82.	.8386	5814.3	26.18	-149.03	-143.58	2.762	.978	1.658	993.
84.	.8450	5596.1	25.40	-145.75	-140.26	2.802	.967	1.659	980.
86.	.8515	5380.5	24.64	-142.47	-136.94	2.841	.957	1.661	966.
88.	.8583	5167.8	23.89	-139.19	-133.62	2.879	.947	1.663	953.
90.	.8652	4958.1	23.15	-135.91	-130.29	2.916	.937	1.665	939.
92.	.8723	4751.6	22.43	-132.62	-126.95	2.953	.927	1.668	925.
94.	.8795	4548.5	21.71	-129.33	-123.61	2.989	.917	1.671	910.
96.	.8870	4348.9	21.01	-126.03	-120.27	3.024	.908	1.675	896.
98.	.8948	4153.1	20.32	-122.73	-116.91	3.059	.900	1.680	881.
100.	.9027	3961.2	19.64	-119.41	-113.55	3.093	.892	1.685	865.
102.	.9109	3773.4	18.97	-116.09	-110.17	3.126	.884	1.691	849.
104.	.9194	3589.8	18.30	-112.76	-106.78	3.159	.878	1.698	833.
106.	.9282	3410.6	17.65	-109.41	-103.38	3.191	.872	1.706	817.
108.	.9372	3235.8	17.00	-106.05	-99.95	3.223	.867	1.715	800.
110.	.9466	3065.6	16.37	-102.67	-96.51	3.255	.864	1.725	783.
112.	.9564	2900.1	15.75	-99.27	-93.05	3.286	.861	1.737	765.
114.	.9665	2739.1	15.14	-95.85	-89.57	3.317	.859	1.750	747.
116.	.9770	2582.8	14.54	-92.40	-86.05	3.348	.857	1.764	729.
118.	.9880	2431.0	13.96	-88.93	-82.51	3.378	.856	1.780	711.
120.	.9995	2283.5	13.39	-85.43	-78.93	3.408	.855	1.797	693.
122.	1.0115	2140.1	12.84	-81.89	-75.32	3.438	.854	1.815	675.
124.	1.0241	2000.5	12.31	-78.32	-71.67	3.467	.850	1.835	657.
126.	1.0373	1864.1	11.80	-74.71	-67.97	3.497	.842	1.855	641.
128.	1.0514	1730.3	11.32	-71.07	-64.24	3.526	.827	1.875	626.
130.	1.0667	1598.7	10.86	-67.34	-60.40	3.556	.830	1.922	608.
132.	1.0827	1469.3	10.36	-63.55	-56.51	3.586	.823	1.959	589.
134.	1.0998	1342.2	9.87	-59.71	-52.56	3.616	.827	2.003	570.
136.	1.1183	1221.7	9.40	-55.77	-48.50	3.646	.821	2.052	553.
138.	1.1383	1101.3	8.90	-51.76	-44.36	3.676	.817	2.104	533.
140.	1.1600	987.2	8.40	-47.66	-40.12	3.706	.814	2.162	512.
142.	1.1841	875.5	7.90	-43.43	-35.73	3.738	.813	2.232	490.
144.	1.2108	767.6	7.39	-39.05	-31.18	3.769	.812	2.313	468.
146.	1.2410	661.1	6.88	-34.51	-26.44	3.802	.813	2.422	444.
148.	1.2755	558.8	6.36	-29.75	-21.46	3.836	.817	2.561	419.
150.	1.3160	459.6	5.84	-24.69	-16.14	3.872	.823	2.752	392.
152.	1.3650	363.9	5.30	-19.25	-10.37	3.910	.832	3.019	363.
154.	1.4267	273.6	4.74	-13.24	-3.97	3.952	.844	3.415	333.
156.	1.5102	190.0	4.14	-6.35	3.46	4.000	.863	4.065	299.
158.	1.6365	114.6	3.47	2.07	12.71	4.058	.894	5.328	261.
160.	1.8686	57.5	2.70	13.71	25.86	4.141	.955	8.060	220.
165.	3.0675	65.8	1.40	47.88	67.82	4.400	.936	5.546	197.
170.	3.8484	119.7	1.03	62.89	87.90	4.520	.846	3.085	209.
175.	4.4120	164.7	.856	72.45	101.13	4.597	.799	2.316	218.
180.	4.8813	204.2	.747	79.97	111.70	4.656	.771	1.943	227.
185.	5.2944	238.9	.670	86.42	120.83	4.706	.751	1.726	234.
190.	5.6720	270.7	.612	92.21	129.08	4.750	.737	1.582	241.
195.	6.0242	300.2	.565	97.56	136.72	4.790	.726	1.480	247.
200.	6.3573	327.9	.527	102.60	143.92	4.827	.718	1.403	253.
210.	6.9810	379.2	.467	112.00	157.37	4.892	.705	1.295	264.
220.	7.5640	426.3	.422	120.78	169.94	4.951	.697	1.223	274.
230.	8.1177	470.3	.387	129.14	181.90	5.004	.690	1.171	283.
240.	8.6494	512.0	.358	137.19	193.42	5.053	.684	1.132	291.
250.	9.1641	551.7	.333	145.02	204.58	5.098	.680	1.102	299.
260.	9.6652	589.9	.313	152.66	215.48	5.141	.676	1.078	307.
270.	10.1552	626.9	.295	160.16	226.17	5.181	.673	1.059	314.
280.	10.6361	662.7	.279	167.54	236.68	5.220	.671	1.044	321.
290.	11.1094	697.7	.266	174.84	247.05	5.256	.669	1.031	328.
300.	11.5764	732.0	.253	182.06	257.30	5.291	.667	1.020	335.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

70. BAR ISOBAR

TEMPERATURE K	VOLUME CM3/G	ISOTHERM DERIVATIVE BAR-CM3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	Cv J/G-K	Cp J/G-K	VELOCITY OF SOUND M/S
* 55.159	.7627	8953.3	39.76	-193.08	-187.74	2.103	1.095	1.662	1166.
56.	.7649	8851.6	39.17	-191.70	-186.35	2.128	1.093	1.661	1160.
58.	.7701	8611.0	37.84	-188.42	-183.03	2.187	1.088	1.660	1146.
60.	.7753	8371.9	36.61	-185.14	-179.71	2.243	1.081	1.658	1133.
62.	.7806	8134.3	35.45	-181.86	-176.39	2.297	1.074	1.657	1120.
64.	.7859	7898.2	34.35	-178.58	-173.08	2.350	1.066	1.656	1108.
66.	.7914	7663.5	33.30	-175.31	-169.77	2.401	1.058	1.656	1095.
68.	.7968	7430.2	32.31	-172.03	-166.46	2.450	1.049	1.655	1083.
70.	.8024	7198.4	31.35	-168.76	-163.15	2.498	1.039	1.655	1071.
72.	.8081	6968.3	30.43	-165.49	-159.84	2.545	1.031	1.654	1058.
74.	.8138	6739.9	29.54	-162.23	-156.53	2.590	1.020	1.654	1046.
76.	.8197	6513.3	28.68	-158.96	-153.22	2.634	1.010	1.654	1033.
78.	.8256	6288.7	27.84	-155.69	-149.91	2.677	.999	1.655	1020.
80.	.8317	6066.2	27.03	-152.42	-146.60	2.719	.989	1.655	1008.
82.	.8380	5846.1	26.23	-149.15	-143.29	2.760	.979	1.656	995.
84.	.8444	5628.4	25.45	-145.88	-139.97	2.800	.968	1.657	982.
86.	.8509	5413.4	24.69	-142.61	-136.66	2.839	.958	1.659	968.
88.	.8576	5201.3	23.94	-139.34	-133.34	2.877	.948	1.661	955.
90.	.8644	4992.1	23.21	-136.06	-130.01	2.915	.938	1.663	941.
92.	.8715	4786.2	22.48	-132.78	-126.68	2.951	.928	1.666	927.
94.	.8787	4583.6	21.77	-129.50	-123.35	2.987	.918	1.669	913.
96.	.8861	4384.7	21.07	-126.21	-120.00	3.022	.909	1.673	898.
98.	.8938	4189.5	20.38	-122.91	-116.65	3.057	.901	1.677	883.
100.	.9017	3998.1	19.70	-119.61	-113.30	3.091	.893	1.692	868.
102.	.9098	3810.9	19.03	-116.29	-109.93	3.124	.885	1.688	852.
104.	.9182	3627.9	18.37	-112.97	-106.54	3.157	.879	1.695	836.
106.	.9269	3449.3	17.72	-109.63	-103.15	3.189	.873	1.702	820.
108.	.9359	3275.1	17.08	-106.29	-99.73	3.221	.868	1.711	803.
110.	.9452	3105.5	16.45	-102.92	-96.30	3.253	.865	1.721	786.
112.	.9548	2940.5	15.83	-99.53	-92.85	3.284	.862	1.732	769.
114.	.9648	2780.2	15.22	-96.13	-89.38	3.314	.860	1.744	751.
116.	.9752	2624.4	14.63	-92.70	-85.87	3.345	.858	1.758	733.
118.	.9860	2473.1	14.05	-89.25	-82.34	3.375	.857	1.773	715.
120.	.9973	2326.2	13.48	-85.76	-78.78	3.405	.856	1.789	697.
122.	1.0091	2183.4	12.94	-82.25	-75.18	3.435	.854	1.807	679.
124.	1.0215	2044.3	12.41	-78.70	-71.55	3.464	.850	1.825	662.
126.	1.0345	1908.5	11.90	-75.12	-67.88	3.494	.842	1.843	646.
128.	1.0482	1775.3	11.42	-71.51	-64.17	3.523	.827	1.861	632.
130.	1.0632	1643.4	10.98	-67.81	-60.37	3.552	.830	1.908	615.
132.	1.0788	1515.0	10.48	-64.06	-56.51	3.582	.829	1.942	596.
134.	1.0954	1389.4	9.98	-60.26	-52.60	3.611	.827	1.979	577.
136.	1.1133	1269.9	9.53	-56.38	-48.59	3.641	.822	2.027	560.
138.	1.1326	1151.0	9.04	-52.43	-44.50	3.671	.817	2.073	540.
140.	1.1534	1038.5	8.55	-48.40	-40.33	3.701	.814	2.126	521.
142.	1.1764	928.0	8.06	-44.25	-36.01	3.731	.812	2.187	500.
144.	1.2017	821.3	7.56	-39.98	-31.57	3.762	.811	2.257	478.
146.	1.2299	716.5	7.06	-35.56	-26.95	3.794	.811	2.349	455.
148.	1.2618	615.8	6.57	-30.97	-22.13	3.827	.814	2.466	432.
150.	1.2985	518.3	6.07	-26.14	-17.05	3.861	.819	2.617	407.
152.	1.3417	424.7	5.57	-21.01	-11.62	3.897	.824	2.820	381.
154.	1.3940	336.6	5.04	-15.48	-5.72	3.936	.833	3.094	354.
156.	1.4603	254.5	4.50	-9.37	.85	3.978	.844	3.494	325.
158.	1.5491	179.5	3.93	-2.43	8.41	4.026	.861	4.126	293.
160.	1.6795	115.9	3.32	5.94	17.70	4.085	.893	5.186	259.
165.	2.4286	55.5	1.88	35.13	52.14	4.296	.966	7.177	203.
170.	3.2691	99.1	1.27	55.54	78.42	4.454	.875	3.837	208.
175.	3.8611	145.3	1.02	67.18	94.21	4.545	.819	2.668	213.
180.	4.3379	186.2	.867	75.77	106.13	4.613	.783	2.151	226.
185.	4.7498	223.2	.768	82.86	116.11	4.667	.760	1.863	234.
190.	5.1205	256.3	.695	89.10	124.95	4.714	.744	1.682	241.
195.	5.4634	287.0	.638	94.78	133.03	4.756	.732	1.557	247.
200.	5.7856	315.8	.592	100.07	140.57	4.795	.723	1.465	253.
210.	6.3850	368.9	.521	109.84	154.54	4.863	.710	1.339	264.
220.	6.9417	417.5	.468	118.89	167.48	4.923	.700	1.256	274.
230.	7.4680	462.9	.427	127.45	179.73	4.977	.692	1.197	283.
240.	7.9718	505.6	.393	135.67	191.47	5.027	.686	1.153	291.
250.	8.4581	546.3	.366	143.62	202.82	5.074	.682	1.119	300.
260.	8.9307	585.3	.342	151.37	213.88	5.117	.677	1.093	307.
270.	9.3920	623.0	.322	158.95	224.70	5.158	.674	1.071	315.
280.	9.8442	659.5	.305	166.41	235.32	5.197	.671	1.054	322.
290.	10.2888	695.1	.290	173.77	245.79	5.233	.669	1.040	329.
300.	10.7269	729.9	.276	181.04	256.13	5.268	.668	1.029	335.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

75. BAR ISOBAR

TEMPERATURE K	VOLUME CM3/G	ISOTHERM DERIVATIVE BAR-CM3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 55.216	.7625	8971.4	39.76	-193.06	-187.34	2.104	1.096	1.662	1166.
56.	.7646	8876.8	39.21	-191.77	-186.04	2.127	1.094	1.661	1161.
58.	.7697	8636.6	37.89	-188.49	-182.72	2.185	1.088	1.659	1148.
60.	.7750	8398.1	36.65	-185.21	-179.40	2.242	1.082	1.658	1135.
62.	.7802	8161.0	35.49	-181.94	-176.09	2.296	1.075	1.657	1122.
64.	.7856	7925.3	34.39	-178.66	-172.77	2.349	1.067	1.656	1109.
66.	.7909	7691.1	33.35	-175.39	-169.46	2.399	1.058	1.655	1097.
68.	.7964	7458.3	32.35	-172.12	-166.15	2.449	1.049	1.654	1084.
70.	.8020	7227.0	31.40	-168.86	-162.84	2.497	1.040	1.654	1072.
72.	.8076	6997.4	30.48	-165.59	-159.54	2.543	1.030	1.654	1060.
74.	.8133	6769.5	29.59	-162.33	-156.23	2.589	1.020	1.653	1047.
76.	.8192	6543.4	28.73	-159.07	-152.92	2.633	1.010	1.653	1035.
78.	.8251	6319.3	27.89	-155.80	-149.61	2.676	1.000	1.654	1022.
80.	.8312	6097.4	27.07	-152.54	-146.31	2.718	.990	1.654	1010.
82.	.8374	5877.8	26.28	-149.28	-143.00	2.759	.979	1.655	997.
84.	.8437	5660.6	25.50	-146.01	-139.69	2.798	.969	1.656	984.
86.	.8502	5446.2	24.74	-142.75	-136.37	2.837	.959	1.657	970.
88.	.8569	5234.6	23.99	-139.48	-133.06	2.876	.948	1.659	957.
90.	.8637	5026.0	23.26	-136.21	-129.73	2.913	.938	1.661	943.
92.	.8707	4820.6	22.54	-132.94	-126.41	2.949	.929	1.663	929.
94.	.8779	4618.6	21.83	-129.66	-123.08	2.985	.919	1.666	915.
96.	.8852	4420.2	21.13	-126.38	-119.74	3.020	.910	1.670	901.
98.	.8928	4225.6	20.44	-123.09	-116.40	3.055	.902	1.674	886.
100.	.9007	4034.9	19.76	-119.80	-113.04	3.089	.894	1.679	871.
102.	.9087	3848.2	19.10	-116.50	-109.68	3.122	.886	1.685	855.
104.	.9171	3665.8	18.44	-113.18	-106.31	3.155	.880	1.691	839.
106.	.9257	3487.7	17.79	-109.86	-102.92	3.187	.874	1.698	823.
108.	.9346	3314.1	17.15	-106.52	-99.51	3.219	.869	1.707	807.
110.	.9438	3145.1	16.52	-103.17	-96.09	3.250	.866	1.716	790.
112.	.9533	2980.7	15.91	-99.80	-92.65	3.281	.863	1.727	772.
114.	.9632	2820.9	15.30	-96.41	-89.18	3.312	.861	1.738	755.
116.	.9734	2665.7	14.71	-92.99	-85.69	3.342	.859	1.751	737.
118.	.9841	2514.9	14.13	-89.56	-82.18	3.372	.858	1.766	719.
120.	.9952	2368.6	13.57	-86.09	-78.63	3.402	.857	1.782	702.
122.	1.0068	2226.3	13.03	-82.60	-75.05	3.432	.855	1.799	684.
124.	1.0190	2087.7	12.50	-79.07	-71.43	3.461	.851	1.815	667.
126.	1.0317	1952.4	12.00	-75.52	-67.78	3.490	.843	1.832	652.
128.	1.0452	1819.8	11.52	-71.93	-64.09	3.519	.827	1.847	638.
130.	1.0598	1687.8	11.09	-68.27	-60.32	3.549	.830	1.895	621.
132.	1.0750	1560.3	10.59	-64.56	-56.50	3.578	.829	1.926	602.
134.	1.0912	1435.9	10.10	-60.80	-52.62	3.607	.827	1.961	584.
136.	1.1085	1317.4	9.65	-56.97	-48.66	3.636	.823	2.003	566.
138.	1.1271	1199.8	9.17	-53.07	-44.62	3.666	.818	2.046	548.
140.	1.1472	1088.6	8.69	-49.11	-40.50	3.695	.814	2.093	529.
142.	1.1691	979.2	8.21	-45.03	-36.26	3.725	.812	2.143	509.
144.	1.1932	873.5	7.72	-40.85	-31.90	3.756	.811	2.211	488.
146.	1.2198	770.0	7.24	-36.54	-27.40	3.787	.810	2.289	466.
148.	1.2496	670.7	6.76	-32.09	-22.71	3.819	.811	2.387	444.
150.	1.2833	574.7	6.29	-27.44	-17.82	3.852	.814	2.512	421.
152.	1.3221	482.6	5.80	-22.56	-12.64	3.886	.818	2.672	397.
154.	1.3680	396.2	5.31	-17.37	-7.11	3.922	.824	2.876	372.
156.	1.4237	314.9	4.81	-11.77	-1.09	3.961	.832	3.153	345.
158.	1.4937	240.6	4.29	-5.62	5.58	4.003	.843	3.544	318.
160.	1.5866	174.7	3.76	1.37	13.27	4.052	.863	4.124	289.
165.	2.0326	74.7	2.42	24.12	39.36	4.212	.939	6.281	224.
170.	2.7752	86.6	1.57	47.26	68.07	4.384	.899	4.636	211.
175.	3.3837	129.4	1.20	61.42	86.79	4.493	.835	3.078	218.
180.	3.8669	170.6	1.00	71.27	100.28	4.569	.795	2.387	226.
185.	4.2781	208.3	.876	79.13	111.22	4.629	.769	2.018	234.
190.	4.6446	242.8	.785	85.87	120.71	4.679	.751	1.791	241.
195.	4.9791	274.9	.716	91.91	129.26	4.724	.738	1.640	247.
200.	5.2919	304.6	.661	97.48	137.17	4.764	.728	1.531	253.
210.	5.8702	359.3	.577	107.65	151.68	4.835	.714	1.384	264.
220.	6.4040	409.3	.516	116.98	165.01	4.897	.703	1.289	274.
230.	6.9065	455.8	.468	125.75	177.55	4.952	.695	1.223	283.
240.	7.3860	499.6	.430	134.13	189.52	5.003	.689	1.174	292.
250.	7.8477	541.2	.399	142.21	201.07	5.050	.683	1.137	300.
260.	8.2954	581.0	.373	150.07	212.28	5.094	.679	1.107	308.
270.	8.7319	619.4	.351	157.75	223.24	5.136	.675	1.084	315.
280.	9.1591	656.6	.331	165.28	233.98	5.175	.672	1.065	322.
290.	9.5787	692.8	.314	172.70	244.54	5.212	.670	1.049	329.
300.	9.9918	728.1	.299	180.03	254.97	5.247	.668	1.037	336.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

80. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	Cv J/G-K	Cp J/G-K	VELOCITY OF SOUND M/S
* 55.273	.7624	8989.5	39.76	-193.03	-186.94	2.104	1.096	1.661	1167.
56.	.7642	8901.9	39.26	-191.84	-185.73	2.126	1.095	1.661	1162.
58.	.7694	8662.2	37.93	-188.56	-182.41	2.184	1.089	1.659	1149.
60.	.7746	8424.1	36.69	-185.29	-179.09	2.240	1.082	1.658	1136.
62.	.7799	8187.5	35.53	-182.02	-175.78	2.295	1.075	1.657	1123.
64.	.7852	7952.4	34.43	-178.75	-172.47	2.347	1.067	1.655	1111.
66.	.7905	7718.6	33.39	-175.48	-169.16	2.398	1.059	1.655	1098.
68.	.7960	7486.3	32.40	-172.22	-165.85	2.448	1.050	1.654	1086.
70.	.8015	7255.6	31.44	-168.95	-162.54	2.495	1.040	1.653	1074.
72.	.8071	7026.4	30.52	-165.69	-159.23	2.542	1.031	1.653	1061.
74.	.8128	6799.0	29.63	-162.43	-155.93	2.587	1.021	1.652	1049.
76.	.8186	6573.4	28.77	-159.17	-152.62	2.631	1.011	1.652	1037.
78.	.8246	6349.8	27.94	-155.92	-149.32	2.674	1.001	1.652	1024.
80.	.8306	6128.4	27.12	-152.66	-146.01	2.716	.990	1.653	1011.
82.	.8368	5909.3	26.33	-149.40	-142.71	2.757	.980	1.653	999.
84.	.8431	5692.8	25.55	-146.14	-139.40	2.797	.970	1.654	986.
86.	.8496	5478.8	24.79	-142.88	-136.09	2.836	.959	1.655	972.
88.	.8562	5267.8	24.04	-139.62	-132.77	2.874	.949	1.657	959.
90.	.8629	5059.7	23.31	-136.36	-129.46	2.911	.939	1.659	945.
92.	.8699	4854.9	22.59	-133.10	-126.14	2.948	.929	1.661	932.
94.	.8770	4653.5	21.89	-129.83	-122.81	2.983	.920	1.664	917.
96.	.8844	4455.6	21.19	-126.55	-119.48	3.018	.911	1.667	903.
98.	.8919	4261.6	20.50	-123.28	-116.14	3.053	.902	1.671	888.
100.	.8997	4071.4	19.83	-119.99	-112.79	3.087	.895	1.676	873.
102.	.9077	3885.3	19.16	-116.70	-109.43	3.120	.887	1.681	858.
104.	.9159	3703.5	18.50	-113.39	-106.07	3.153	.881	1.687	842.
106.	.9245	3526.0	17.86	-110.08	-102.68	3.185	.875	1.694	826.
108.	.9333	3352.9	17.22	-106.75	-99.29	3.217	.870	1.702	810.
110.	.9424	3184.4	16.60	-103.41	-95.87	3.248	.867	1.711	793.
112.	.9518	3020.6	15.98	-100.06	-92.44	3.279	.864	1.722	776.
114.	.9615	2861.3	15.38	-96.68	-88.99	3.309	.862	1.733	759.
116.	.9717	2706.6	14.79	-93.28	-85.51	3.340	.860	1.746	741.
118.	.9822	2556.4	14.22	-89.86	-82.00	3.370	.859	1.759	724.
120.	.9931	2410.5	13.66	-86.41	-78.47	3.399	.858	1.774	706.
122.	1.0046	2268.7	13.12	-82.94	-74.90	3.429	.856	1.790	689.
124.	1.0165	2130.7	12.60	-79.44	-71.30	3.458	.852	1.806	672.
126.	1.0290	1995.9	12.10	-75.90	-67.67	3.487	.843	1.822	657.
128.	1.0422	1863.9	11.62	-72.35	-64.01	3.516	.827	1.835	643.
130.	1.0565	1731.8	11.20	-68.72	-60.27	3.545	.831	1.881	626.
132.	1.0714	1605.1	10.71	-65.04	-56.47	3.574	.829	1.912	608.
134.	1.0871	1481.9	10.22	-61.32	-52.63	3.603	.827	1.944	590.
136.	1.1040	1364.1	9.76	-57.54	-48.70	3.632	.823	1.981	573.
138.	1.1220	1247.7	9.29	-53.69	-44.71	3.661	.818	2.020	555.
140.	1.1413	1137.7	8.83	-49.78	-40.65	3.690	.814	2.063	537.
142.	1.1624	1029.3	8.36	-45.77	-36.47	3.720	.812	2.113	518.
144.	1.1853	924.2	7.88	-41.67	-32.19	3.750	.810	2.170	498.
146.	1.2105	822.0	7.41	-37.46	-27.78	3.780	.809	2.237	477.
148.	1.2385	723.9	6.94	-33.13	-23.22	3.811	.809	2.321	456.
150.	1.2697	629.0	6.48	-28.63	-18.47	3.843	.811	2.426	434.
152.	1.3052	538.3	6.02	-23.94	-13.50	3.876	.814	2.556	411.
154.	1.3463	453.1	5.55	-19.01	-8.24	3.910	.818	2.716	388.
156.	1.3947	372.3	5.08	-13.77	-2.61	3.947	.824	2.924	364.
158.	1.4533	298.7	4.60	-8.15	3.48	3.986	.831	3.193	339.
160.	1.5266	231.6	4.11	-1.94	10.27	4.028	.846	3.565	312.
165.	1.8291	112.4	2.89	16.84	31.47	4.159	.903	4.395	249.
170.	2.3888	87.5	1.93	38.84	57.95	4.317	.906	5.324	220.
175.	2.9757	118.7	1.42	55.24	79.05	4.439	.850	3.497	221.
180.	3.4590	158.0	1.16	66.51	94.19	4.525	.807	2.642	227.
185.	3.8681	195.7	.997	75.22	106.16	4.590	.778	2.185	234.
190.	4.2296	230.9	.884	82.52	116.36	4.645	.758	1.909	241.
195.	4.5582	263.6	.800	88.96	125.43	4.692	.744	1.728	247.
200.	4.8621	294.3	.734	94.82	133.72	4.734	.733	1.599	253.
210.	5.4217	350.5	.636	105.42	148.80	4.807	.717	1.430	264.
220.	5.9353	401.7	.565	115.04	162.53	4.871	.706	1.323	274.
230.	6.4169	449.3	.511	124.03	175.37	4.928	.698	1.249	284.
240.	6.8749	494.1	.469	132.58	187.58	4.980	.691	1.195	292.
250.	7.3150	536.5	.434	140.80	199.32	5.028	.685	1.154	301.
260.	7.7409	577.1	.404	148.77	210.69	5.073	.681	1.122	308.
270.	8.1555	616.1	.379	156.54	221.78	5.115	.677	1.096	316.
280.	8.5607	653.9	.358	164.15	232.64	5.154	.673	1.076	323.
290.	8.9584	690.7	.339	171.64	243.30	5.192	.671	1.059	330.
300.	9.3496	726.5	.323	179.02	253.82	5.227	.669	1.045	337.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

85. BAR ISOBAR

TEMPERATURE K	VOLUME CM3/G	ISOTHERM DERIVATIVE BAR-CM3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	Cv J/G-K	Cp J/G-K	VELOCITY OF SOUND M/S
* 55.330	.7622	9007.6	39.77	-193.01	-186.53	2.105	1.097	1.661	1168.
56.	.7639	8927.0	39.30	-191.91	-185.42	2.125	1.095	1.661	1163.
58.	.7691	8687.8	37.97	-188.64	-182.10	2.183	1.090	1.659	1150.
60.	.7743	8450.2	36.74	-185.36	-178.78	2.239	1.083	1.657	1137.
62.	.7795	8214.0	35.57	-182.09	-175.47	2.293	1.076	1.656	1125.
64.	.7848	7979.4	34.48	-178.83	-172.16	2.346	1.068	1.655	1112.
66.	.7901	7746.1	33.43	-175.57	-168.85	2.397	1.059	1.654	1100.
68.	.7956	7514.3	32.44	-172.30	-165.54	2.446	1.050	1.653	1087.
70.	.8011	7284.0	31.48	-169.05	-162.24	2.494	1.041	1.652	1075.
72.	.8067	7055.3	30.57	-165.79	-158.93	2.541	1.031	1.652	1063.
74.	.8123	6828.4	29.68	-162.53	-155.63	2.586	1.022	1.651	1051.
76.	.8181	6603.3	28.82	-159.28	-152.33	2.630	1.011	1.651	1038.
78.	.8240	6380.3	27.98	-156.03	-149.02	2.673	1.001	1.651	1026.
80.	.8301	6159.4	27.17	-152.78	-145.72	2.715	.991	1.652	1013.
82.	.8362	5940.8	26.38	-149.52	-142.42	2.755	.981	1.652	1000.
84.	.8425	5724.7	25.60	-146.27	-139.11	2.795	.970	1.653	988.
86.	.8489	5511.4	24.84	-143.02	-135.80	2.834	.960	1.654	974.
88.	.8555	5300.8	24.10	-139.77	-132.49	2.872	.950	1.655	961.
90.	.8622	5093.3	23.37	-136.51	-129.18	2.909	.940	1.657	948.
92.	.8691	4889.0	22.65	-133.25	-125.86	2.946	.930	1.659	934.
94.	.8762	4688.2	21.94	-129.99	-122.54	2.982	.921	1.662	920.
96.	.8835	4490.9	21.25	-126.72	-119.22	3.017	.912	1.665	906.
98.	.8910	4297.3	20.56	-123.45	-115.68	3.051	.903	1.669	891.
100.	.8987	4107.7	19.89	-120.18	-112.54	3.085	.895	1.673	876.
102.	.9066	3922.2	19.22	-116.89	-109.19	3.118	.888	1.678	861.
104.	.9148	3740.9	18.57	-113.60	-105.83	3.151	.882	1.684	845.
106.	.9232	3563.9	17.93	-110.30	-102.45	3.183	.876	1.691	829.
108.	.9320	3391.4	17.29	-106.98	-99.06	3.214	.871	1.698	813.
110.	.9410	3223.5	16.67	-103.65	-95.66	3.246	.868	1.707	796.
112.	.9503	3060.1	16.06	-100.31	-92.23	3.276	.865	1.717	780.
114.	.9599	2901.4	15.46	-96.95	-88.79	3.307	.863	1.728	762.
116.	.9699	2747.2	14.87	-93.56	-85.32	3.337	.861	1.740	745.
118.	.9803	2597.5	14.30	-90.16	-81.83	3.367	.860	1.753	728.
120.	.9911	2452.1	13.75	-86.73	-78.30	3.397	.859	1.767	710.
122.	1.0024	2310.8	13.21	-83.27	-74.75	3.426	.857	1.782	693.
124.	1.0141	2173.3	12.69	-79.79	-71.17	3.455	.852	1.797	677.
126.	1.0264	2039.0	12.19	-76.28	-67.56	3.484	.844	1.811	662.
128.	1.0393	1907.5	11.72	-72.75	-63.92	3.513	.827	1.823	648.
130.	1.0533	1775.3	11.30	-69.16	-60.20	3.541	.831	1.868	632.
132.	1.0679	1649.4	10.82	-65.51	-56.44	3.570	.829	1.898	614.
134.	1.0832	1527.4	10.34	-61.83	-52.62	3.599	.827	1.927	597.
136.	1.0996	1410.2	9.87	-58.08	-48.74	3.628	.824	1.959	579.
138.	1.1170	1294.9	9.41	-54.29	-44.79	3.656	.819	1.996	562.
140.	1.1357	1185.8	8.95	-50.43	-40.78	3.685	.815	2.035	544.
142.	1.1560	1078.2	8.49	-46.48	-36.66	3.715	.812	2.081	526.
144.	1.1780	973.8	8.03	-42.45	-32.44	3.744	.810	2.133	506.
146.	1.2019	872.7	7.56	-38.33	-28.11	3.774	.808	2.191	486.
148.	1.2283	775.5	7.11	-34.10	-23.66	3.804	.808	2.263	466.
150.	1.2575	681.7	6.66	-29.73	-19.04	3.835	.809	2.354	445.
152.	1.2903	592.1	6.22	-25.21	-14.24	3.867	.811	2.463	424.
154.	1.3276	507.9	5.77	-20.48	-9.20	3.900	.814	2.592	402.
156.	1.3708	427.4	5.32	-15.51	-3.86	3.934	.817	2.756	380.
158.	1.4216	354.3	4.86	-10.25	1.83	3.971	.822	2.952	357.
160.	1.4828	286.7	4.41	-4.56	8.04	4.010	.834	3.218	333.
165.	1.7115	156.9	3.28	11.85	26.40	4.123	.879	4.185	273.
170.	2.1194	103.2	2.30	31.44	49.46	4.260	.897	4.801	235.
175.	2.6382	115.3	1.68	48.91	71.34	4.387	.859	3.823	227.
180.	3.1081	149.2	1.34	61.55	87.97	4.481	.816	2.895	230.
185.	3.5114	185.6	1.13	71.16	101.00	4.552	.786	2.358	236.
190.	3.8671	220.7	.992	79.06	111.93	4.611	.765	2.033	242.
195.	4.1890	253.8	.891	85.93	121.54	4.661	.749	1.820	248.
200.	4.4862	284.9	.813	92.12	130.25	4.705	.738	1.671	254.
210.	5.0282	342.4	.699	103.16	145.90	4.781	.721	1.478	265.
220.	5.5236	394.8	.618	113.09	160.04	4.847	.710	1.358	275.
230.	5.9865	443.4	.556	122.30	173.19	4.905	.701	1.276	284.
240.	6.4255	489.0	.508	131.02	185.64	4.958	.693	1.217	293.
250.	6.8463	532.2	.469	139.38	197.57	5.007	.687	1.172	301.
260.	7.2529	573.5	.437	147.46	209.11	5.052	.682	1.137	309.
270.	7.6480	613.2	.409	155.32	220.33	5.095	.678	1.109	317.
280.	8.0339	651.5	.385	163.01	231.30	5.135	.674	1.086	324.
290.	8.4121	688.8	.365	170.57	242.07	5.172	.671	1.068	331.
300.	8.7839	725.2	.347	178.01	252.67	5.208	.669	1.053	338.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

90. BAR ISOBAR

TEMPERATURE K	VOLUME CM3/G	ISOTHERM DERIVATIVE BAR-CM3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 55.386	.7620	9025.7	39.77	-192.98	-186.13	2.105	1.097	1.661	1169.
56.	.7636	8952.1	39.34	-191.98	-185.11	2.123	1.096	1.660	1165.
58.	.7687	8713.3	38.02	-188.71	-181.79	2.181	1.090	1.659	1151.
60.	.7739	8476.2	36.78	-185.44	-178.47	2.238	1.084	1.657	1139.
62.	.7791	8240.5	35.62	-182.17	-175.16	2.292	1.076	1.656	1126.
64.	.7844	8006.3	34.52	-178.91	-171.85	2.345	1.068	1.654	1113.
66.	.7897	7773.5	33.48	-175.65	-168.54	2.395	1.060	1.653	1101.
68.	.7951	7542.2	32.48	-172.39	-165.24	2.445	1.051	1.652	1089.
70.	.8006	7312.4	31.53	-169.14	-161.93	2.493	1.042	1.652	1077.
72.	.8062	7084.2	30.61	-165.89	-158.63	2.539	1.032	1.651	1065.
74.	.8119	6857.8	29.72	-162.64	-155.33	2.584	1.022	1.650	1052.
76.	.8176	6633.2	28.86	-159.39	-152.03	2.628	1.012	1.650	1040.
78.	.8235	6410.6	28.03	-156.14	-148.73	2.671	1.002	1.650	1028.
80.	.8295	6190.2	27.22	-152.89	-145.43	2.713	.992	1.650	1015.
82.	.8356	5972.2	26.42	-149.65	-142.12	2.754	.981	1.651	1002.
84.	.8419	5756.6	25.65	-146.40	-138.82	2.794	.971	1.651	989.
86.	.8482	5543.8	24.89	-143.15	-135.52	2.832	.961	1.652	976.
88.	.8548	5333.7	24.15	-139.91	-132.21	2.870	.951	1.653	963.
90.	.8615	5126.8	23.42	-136.66	-128.90	2.908	.941	1.655	950.
92.	.8683	4923.0	22.70	-133.41	-125.59	2.944	.931	1.657	936.
94.	.8754	4722.7	22.00	-130.15	-122.27	2.980	.922	1.660	922.
96.	.8826	4525.9	21.30	-126.89	-118.95	3.015	.913	1.663	908.
98.	.8901	4332.9	20.62	-123.63	-115.62	3.049	.904	1.666	894.
100.	.8977	4143.9	19.95	-120.36	-112.28	3.083	.896	1.670	879.
102.	.9056	3958.9	19.29	-117.09	-108.94	3.116	.889	1.675	864.
104.	.9137	3778.1	18.64	-113.81	-105.58	3.148	.883	1.681	848.
106.	.9221	3601.7	17.99	-110.51	-102.22	3.181	.877	1.687	832.
108.	.9307	3429.7	17.36	-107.21	-98.83	3.212	.872	1.695	816.
110.	.9396	3262.3	16.74	-103.89	-95.44	3.243	.869	1.703	800.
112.	.9488	3099.4	16.13	-100.56	-92.02	3.274	.866	1.712	783.
114.	.9584	2941.2	15.54	-97.21	-88.59	3.305	.864	1.723	766.
116.	.9682	2787.5	14.95	-93.84	-85.13	3.335	.862	1.735	749.
118.	.9785	2638.3	14.39	-90.45	-81.65	3.364	.861	1.747	732.
120.	.9891	2493.4	13.83	-87.04	-78.14	3.394	.860	1.761	715.
122.	1.0002	2352.6	13.30	-83.60	-74.60	3.423	.857	1.775	698.
124.	1.0118	2215.5	12.78	-80.14	-71.03	3.452	.853	1.789	682.
126.	1.0239	2081.7	12.29	-76.65	-67.44	3.481	.844	1.802	667.
128.	1.0365	1950.6	11.81	-73.15	-63.82	3.509	.828	1.812	653.
130.	1.0502	1818.5	11.40	-69.58	-60.13	3.538	.83.	1.856	637.
132.	1.0645	1693.3	10.93	-65.97	-56.39	3.566	.830	1.885	620.
134.	1.0794	1572.3	10.45	-62.32	-52.61	3.595	.827	1.912	603.
136.	1.0954	1455.6	9.98	-58.62	-48.76	3.623	.824	1.940	585.
138.	1.1123	1341.4	9.53	-54.86	-44.85	3.652	.820	1.975	569.
140.	1.1304	1233.1	9.08	-51.05	-40.88	3.680	.815	2.010	551.
142.	1.1500	1126.3	8.62	-47.16	-36.81	3.709	.812	2.052	534.
144.	1.1711	1022.3	8.17	-43.20	-32.66	3.738	.810	2.100	515.
146.	1.1939	922.2	7.72	-39.15	-28.41	3.768	.808	2.152	496.
148.	1.2190	825.9	7.27	-35.01	-24.04	3.797	.807	2.214	476.
150.	1.2465	733.0	6.83	-30.76	-19.54	3.828	.807	2.292	456.
152.	1.2770	644.3	6.40	-26.37	-14.88	3.859	.808	2.384	436.
154.	1.3113	560.9	5.97	-21.81	-10.01	3.890	.81	2.492	415.
156.	1.3504	480.7	5.53	-17.06	-4.91	3.923	.813	2.626	394.
158.	1.3956	408.0	5.10	-12.07	.49	3.958	.816	2.777	373.
160.	1.4485	340.1	4.67	-6.75	6.28	3.994	.826	2.978	350.
165.	1.6335	203.4	3.60	8.11	22.61	4.096	.863	3.673	294.
170.	1.9412	130.1	2.65	25.54	43.01	4.216	.882	4.328	253.
175.	2.3715	120.9	1.95	42.82	64.17	4.339	.861	3.954	236.
180.	2.8107	145.4	1.53	56.50	81.80	4.438	.823	3.113	235.
185.	3.2022	178.6	1.28	66.99	95.81	4.515	.792	2.526	239.
190.	3.5500	212.7	1.11	75.52	107.47	4.577	.770	2.157	244.
195.	3.8646	245.6	.989	82.83	117.61	4.630	.754	1.914	250.
200.	4.1543	276.9	.897	89.35	126.74	4.676	.742	1.745	255.
210.	4.6808	335.3	.765	100.87	142.99	4.756	.725	1.527	266.
220.	5.1597	388.5	.672	111.11	157.55	4.824	.713	1.394	276.
230.	5.6057	438.0	.603	120.56	171.01	4.883	.703	1.304	285.
240.	6.0275	484.4	.549	129.46	183.71	4.937	.696	1.239	294.
250.	6.4311	528.3	.506	137.96	195.84	4.987	.689	1.190	302.
260.	6.8203	570.2	.470	146.15	207.53	5.033	.684	1.151	310.
270.	7.1981	610.5	.439	154.11	218.89	5.076	.679	1.121	318.
280.	7.5666	649.5	.413	161.88	229.98	5.116	.675	1.097	325.
290.	7.9275	687.3	.391	169.50	240.85	5.154	.672	1.077	332.
300.	8.2819	724.1	.371	176.99	251.53	5.190	.669	1.061	339.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

95. BAR ISOBAR

TEMPERATURE K	VOLUME CM3/G	ISOTHERM DERIVATIVE BAR-CM3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 55.443	.7618	9043.7	39.77	-192.96	-185.72	2.105	1.098	1.661	1170.
56.	.7633	8977.0	39.39	-192.05	-184.80	2.122	1.096	1.660	1166.
58.	.7684	8738.8	38.06	-188.78	-181.48	2.180	1.091	1.658	1153.
60.	.7735	8502.1	36.82	-185.51	-178.16	2.236	1.084	1.657	1140.
62.	.7788	8266.9	35.66	-182.25	-174.85	2.291	1.077	1.655	1127.
64.	.7840	8033.2	34.56	-178.99	-171.54	2.343	1.069	1.654	1115.
66.	.7893	7800.8	33.52	-175.74	-168.24	2.394	1.060	1.653	1103.
68.	.7947	7570.0	32.53	-172.48	-164.93	2.443	1.051	1.652	1090.
70.	.8002	7340.7	31.57	-169.23	-161.63	2.491	1.042	1.651	1078.
72.	.8057	7113.0	30.65	-165.98	-158.33	2.538	1.033	1.650	1066.
74.	.8114	6887.0	29.77	-162.74	-155.03	2.583	1.023	1.650	1054.
76.	.8171	6663.0	28.91	-159.49	-151.73	2.627	1.013	1.649	1042.
78.	.8230	6440.9	28.07	-156.25	-148.43	2.670	1.003	1.649	1029.
80.	.8289	6221.0	27.26	-153.01	-145.13	2.712	.992	1.649	1017.
82.	.8350	6003.5	26.47	-149.77	-141.83	2.752	.982	1.649	1004.
84.	.8412	5788.4	25.70	-146.53	-138.53	2.792	.972	1.650	991.
86.	.8476	5576.0	24.94	-143.29	-135.23	2.831	.961	1.651	978.
88.	.8541	5366.6	24.20	-140.04	-131.93	2.869	.951	1.652	965.
90.	.8608	5160.1	23.47	-136.80	-128.62	2.906	.941	1.653	952.
92.	.8676	4956.9	22.76	-133.56	-125.32	2.942	.932	1.655	938.
94.	.8746	4757.1	22.05	-130.31	-122.00	2.978	.922	1.657	925.
96.	.8818	4560.8	21.36	-127.06	-118.68	3.013	.913	1.660	910.
98.	.8892	4368.4	20.68	-123.81	-115.36	3.047	.905	1.664	896.
100.	.8967	4179.8	20.01	-120.55	-112.03	3.081	.897	1.667	881.
102.	.9046	3995.3	19.35	-117.28	-108.69	3.114	.890	1.672	866.
104.	.9126	3815.1	18.70	-114.01	-105.34	3.146	.884	1.677	851.
106.	.9209	3639.2	18.06	-110.73	-101.98	3.178	.878	1.684	835.
108.	.9294	3467.7	17.43	-107.43	-98.60	3.210	.873	1.691	819.
110.	.9383	3300.8	16.81	-104.13	-95.22	3.241	.869	1.699	803.
112.	.9474	3138.5	16.21	-100.81	-91.81	3.272	.867	1.708	786.
114.	.9568	2980.7	15.61	-97.47	-88.38	3.302	.865	1.718	770.
116.	.9666	2827.5	15.03	-94.12	-84.94	3.332	.863	1.729	753.
118.	.9767	2678.8	14.47	-90.74	-81.46	3.362	.862	1.742	736.
120.	.9872	2534.3	13.92	-87.35	-77.97	3.391	.861	1.754	719.
122.	.9981	2394.0	13.38	-83.93	-74.44	3.420	.858	1.768	702.
124.	1.0095	2257.3	12.87	-80.48	-70.89	3.449	.854	1.781	686.
126.	1.0214	2124.0	12.38	-77.02	-67.31	3.478	.845	1.793	671.
128.	1.0338	1993.4	11.91	-73.54	-63.71	3.506	.828	1.801	658.
130.	1.0473	1861.4	11.50	-70.00	-60.05	3.534	.831	1.844	643.
132.	1.0612	1736.7	11.03	-66.42	-56.34	3.563	.830	1.872	626.
134.	1.0758	1616.8	10.56	-62.80	-52.58	3.591	.827	1.897	609.
136.	1.0913	1500.5	10.09	-59.13	-48.76	3.619	.824	1.924	592.
138.	1.1078	1387.3	9.64	-55.42	-44.89	3.648	.820	1.956	575.
140.	1.1253	1279.7	9.19	-51.66	-40.96	3.676	.81	1.987	553.
142.	1.1442	1173.4	8.75	-47.81	-36.94	3.704	.812	2.025	541.
144.	1.1646	1069.9	8.31	-43.91	-32.85	3.733	.810	2.070	523.
146.	1.1864	970.7	7.87	-39.93	-28.66	3.762	.808	2.117	504.
148.	1.2103	875.2	7.42	-35.87	-24.37	3.791	.806	2.170	485.
150.	1.2363	783.0	6.99	-31.72	-19.97	3.821	.806	2.238	466.
152.	1.2649	695.1	6.57	-27.45	-15.43	3.851	.806	2.318	447.
154.	1.2968	612.5	6.15	-23.03	-10.71	3.882	.807	2.409	427.
156.	1.3326	532.4	5.74	-18.46	-5.80	3.913	.809	2.521	407.
158.	1.3735	460.1	5.32	-13.69	-.64	3.946	.811	2.643	387.
160.	1.4203	392.0	4.90	-8.65	4.85	3.981	.820	2.798	366.
165.	1.5765	250.6	3.89	5.12	20.10	4.074	.851	3.328	313.
170.	1.8200	163.6	2.96	20.90	38.19	4.182	.867	3.886	271.
175.	2.1693	135.2	2.23	37.32	57.93	4.297	.854	3.885	247.
180.	2.5637	147.3	1.74	51.54	75.89	4.398	.827	3.260	241.
185.	2.9360	175.2	1.44	62.78	90.67	4.479	.797	2.676	243.
190.	3.2729	207.1	1.24	71.91	103.01	4.545	.775	2.276	247.
195.	3.5791	239.3	1.09	79.68	113.69	4.601	.758	2.008	252.
200.	3.8611	270.4	.987	86.55	123.23	4.649	.746	1.819	257.
210.	4.3738	329.3	.834	98.56	140.11	4.731	.723	1.577	267.
220.	4.8363	383.0	.729	109.12	155.07	4.801	.716	1.430	277.
230.	5.2667	433.1	.652	118.81	168.84	4.862	.706	1.331	286.
240.	5.6730	480.2	.591	127.89	181.78	4.917	.698	1.260	295.
250.	6.0610	524.8	.543	136.53	194.11	4.968	.691	1.207	303.
260.	6.4346	567.4	.504	144.84	205.97	5.014	.685	1.166	311.
270.	6.7967	608.2	.470	152.90	217.46	5.057	.680	1.134	318.
280.	7.1496	647.7	.442	160.75	228.67	5.098	.676	1.108	326.
290.	7.4948	686.0	.417	168.43	239.63	5.137	.672	1.086	333.
300.	7.8337	723.3	.396	175.90	250.40	5.173	.669	1.069	340.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

100. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 55.500	.7617	9061.8	39.78	-192.94	-185.32	2.106	1.098	1.660	1170.
56.	.7629	9002.0	39.43	-192.12	-184.49	2.121	1.097	1.660	1167.
58.	.7680	8764.2	38.10	-188.85	-181.17	2.179	1.091	1.658	1154.
60.	.7732	8527.9	36.86	-185.59	-177.86	2.235	1.085	1.656	1141.
62.	.7784	8293.2	35.70	-182.33	-174.54	2.289	1.077	1.655	1129.
64.	.7836	8060.0	34.61	-179.07	-171.24	2.342	1.069	1.653	1116.
66.	.7889	7828.1	33.56	-175.82	-167.93	2.393	1.061	1.652	1104.
68.	.7943	7597.7	32.57	-172.57	-164.63	2.442	1.052	1.651	1092.
70.	.7998	7368.9	31.62	-169.32	-161.33	2.490	1.043	1.650	1080.
72.	.8053	7141.7	30.70	-166.08	-158.03	2.536	1.033	1.649	1068.
74.	.8109	6916.2	29.81	-162.84	-154.73	2.582	1.023	1.649	1056.
76.	.8166	6692.6	28.95	-159.60	-151.43	2.626	1.013	1.648	1043.
78.	.8225	6471.1	28.12	-156.36	-148.13	2.668	1.003	1.648	1031.
80.	.8284	6251.7	27.31	-153.12	-144.84	2.710	.993	1.648	1019.
82.	.8344	6034.6	26.52	-149.89	-141.54	2.751	.983	1.648	1006.
84.	.8406	5820.1	25.75	-146.65	-138.25	2.790	.972	1.648	993.
86.	.8470	5608.2	24.99	-143.42	-134.95	2.829	.962	1.649	980.
88.	.8534	5399.2	24.25	-140.18	-131.65	2.867	.952	1.650	967.
90.	.8600	5193.3	23.52	-136.95	-128.35	2.904	.942	1.651	954.
92.	.8668	4990.6	22.81	-133.71	-125.04	2.941	.932	1.653	941.
94.	.8738	4791.3	22.11	-130.47	-121.73	2.976	.923	1.655	927.
96.	.8809	4595.6	21.42	-127.23	-118.42	3.011	.914	1.658	913.
98.	.8883	4403.6	20.74	-123.98	-115.10	3.045	.906	1.661	899.
100.	.8958	4215.6	20.07	-120.73	-111.77	3.079	.898	1.665	884.
102.	.9035	4031.6	19.41	-117.47	-108.44	3.112	.891	1.669	869.
104.	.9115	3851.9	18.76	-114.21	-105.10	3.144	.885	1.674	854.
106.	.9197	3676.5	18.13	-110.94	-101.74	3.176	.879	1.680	838.
108.	.9282	3505.6	17.50	-107.66	-98.37	3.208	.874	1.687	822.
110.	.9369	3339.1	16.88	-104.36	-94.99	3.239	.870	1.695	806.
112.	.9460	3177.3	16.28	-101.05	-91.59	3.269	.869	1.704	790.
114.	.9553	3020.0	15.69	-97.73	-88.18	3.300	.865	1.713	773.
116.	.9649	2867.2	15.11	-94.39	-84.74	3.330	.864	1.724	756.
118.	.9749	2719.0	14.55	-91.03	-81.28	3.359	.863	1.736	740.
120.	.9853	2575.0	14.00	-87.65	-77.79	3.388	.862	1.748	723.
122.	.9960	2435.0	13.47	-84.24	-74.28	3.418	.859	1.761	706.
124.	1.0073	2298.8	12.96	-80.82	-70.75	3.446	.854	1.773	691.
126.	1.0189	2165.9	12.47	-77.37	-67.18	3.475	.845	1.784	676.
128.	1.0312	2035.8	12.00	-73.91	-63.60	3.503	.839	1.791	663.
130.	1.0444	1903.9	11.60	-70.41	-59.98	3.531	.832	1.833	648.
132.	1.0580	1779.8	11.14	-66.86	-56.28	3.559	.830	1.860	631.
134.	1.0723	1660.8	10.67	-63.27	-52.55	3.587	.828	1.884	615.
136.	1.0874	1544.8	10.20	-59.63	-48.75	3.615	.825	1.909	598.
138.	1.1035	1432.5	9.76	-55.95	-44.92	3.643	.821	1.937	581.
140.	1.1205	1325.5	9.31	-52.23	-41.03	3.671	.816	1.965	565.
142.	1.1388	1219.8	8.87	-48.44	-37.06	3.700	.813	2.001	548.
144.	1.1584	1116.6	8.44	-44.59	-33.01	3.728	.810	2.042	531.
146.	1.1794	1018.3	8.00	-40.68	-28.89	3.756	.809	2.086	513.
148.	1.2022	923.4	7.56	-36.69	-24.67	3.785	.806	2.132	494.
150.	1.2269	831.9	7.14	-32.62	-20.35	3.814	.805	2.190	476.
152.	1.2539	744.8	6.74	-28.45	-15.91	3.843	.805	2.261	457.
154.	1.2838	662.7	6.33	-24.16	-11.32	3.873	.805	2.339	439.
156.	1.3169	582.9	5.92	-19.74	-6.57	3.904	.806	2.435	420.
158.	1.3543	510.7	5.52	-15.14	-1.60	3.936	.808	2.534	400.
160.	1.3965	442.5	5.12	-10.32	3.64	3.969	.815	2.661	380.
165.	1.5324	297.6	4.14	2.62	17.95	4.057	.843	3.079	330.
170.	1.7330	200.7	3.25	17.16	34.49	4.155	.856	3.535	288.
175.	2.0184	156.6	2.50	32.56	52.75	4.261	.851	3.697	261.
180.	2.3627	155.2	1.96	46.82	70.45	4.361	.827	3.319	249.
185.	2.7091	175.9	1.61	58.62	85.71	4.445	.805	2.792	248.
190.	3.0315	204.4	1.37	68.30	98.61	4.514	.778	2.385	250.
195.	3.3278	235.0	1.21	76.51	109.79	4.572	.762	2.097	254.
200.	3.6015	265.6	1.08	83.71	119.73	4.622	.749	1.892	259.
210.	4.0994	324.2	.907	96.22	137.21	4.707	.731	1.627	269.
220.	4.5486	378.8	.789	107.13	152.62	4.779	.718	1.467	278.
230.	4.9635	429.0	.702	117.05	166.68	4.842	.708	1.359	287.
240.	5.3555	476.6	.635	126.31	179.87	4.898	.700	1.282	295.
250.	5.7292	521.8	.582	135.10	192.39	4.949	.693	1.225	304.
260.	6.0885	564.9	.538	143.53	204.42	4.996	.687	1.181	312.
270.	6.4365	606.3	.502	151.68	216.05	5.040	.681	1.146	319.
280.	6.7752	646.2	.471	159.61	227.36	5.081	.677	1.118	327.
290.	7.1063	685.0	.445	167.36	238.43	5.120	.673	1.095	334.
300.	7.4311	722.7	.421	174.97	249.28	5.157	.670	1.077	341.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

110. BAR ISOBAR

	TEMPERATURE K	VOLUME CM3/G	ISOTHERM DERIVATIVE BAR-CM3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	Cv J/G-K	Cp J/G-K	VELOCITY OF SOUND M/S
*	55.613	.7613	9097.8	39.78	-192.88	-184.51	2.107	1.099	1.660	1172.
	56.	.7623	9051.7	39.51	-192.25	-183.87	2.118	1.098	1.660	1170.
	58.	.7674	8814.8	38.19	-188.99	-180.55	2.176	1.093	1.658	1156.
	60.	.7725	8579.5	36.95	-185.73	-177.24	2.233	1.086	1.656	1144.
	62.	.7777	8345.7	35.79	-182.48	-173.93	2.287	1.079	1.654	1131.
	64.	.7829	8113.4	34.69	-179.23	-170.62	2.339	1.071	1.653	1119.
	66.	.7881	7882.5	33.65	-175.99	-167.32	2.390	1.062	1.651	1107.
	68.	.7935	7653.0	32.66	-172.74	-164.02	2.439	1.053	1.650	1095.
	70.	.7989	7425.1	31.70	-169.51	-160.72	2.487	1.044	1.649	1083.
	72.	.8044	7198.9	30.79	-166.27	-157.42	2.534	1.034	1.648	1071.
	74.	.8100	6974.4	29.90	-163.04	-154.13	2.579	1.025	1.647	1059.
	76.	.8156	6751.7	29.04	-159.81	-150.83	2.623	1.015	1.646	1047.
	78.	.8214	6531.1	28.21	-156.58	-147.54	2.665	1.004	1.646	1034.
	80.	.8273	6312.7	27.40	-153.35	-144.25	2.707	.994	1.645	1022.
	82.	.8333	6096.6	26.61	-150.12	-140.96	2.748	.984	1.645	1010.
	84.	.8394	5883.1	25.84	-146.90	-137.67	2.787	.974	1.646	997.
	86.	.8457	5672.2	25.09	-143.68	-134.37	2.826	.963	1.646	984.
	88.	.8521	5464.2	24.35	-140.45	-131.08	2.864	.953	1.647	971.
	90.	.8586	5259.3	23.62	-137.23	-127.79	2.901	.944	1.648	958.
	92.	.8653	5057.6	22.91	-134.01	-124.49	2.937	.934	1.649	945.
	94.	.8722	4859.3	22.22	-130.78	-121.19	2.973	.925	1.651	931.
	96.	.8792	4664.6	21.53	-127.55	-117.88	3.007	.916	1.653	918.
	98.	.8865	4473.6	20.85	-124.32	-114.57	3.042	.908	1.656	903.
	100.	.8939	4286.6	20.19	-121.09	-111.26	3.075	.900	1.659	889.
	102.	.9015	4103.6	19.53	-117.85	-107.93	3.108	.893	1.664	874.
	104.	.9094	3924.9	18.89	-114.61	-104.60	3.140	.886	1.668	859.
	106.	.9175	3750.5	18.26	-111.35	-101.26	3.172	.881	1.674	844.
	108.	.9258	3580.5	17.63	-108.09	-97.91	3.204	.876	1.680	829.
	110.	.9343	3415.0	17.02	-104.82	-94.54	3.234	.872	1.687	813.
	112.	.9432	3254.1	16.42	-101.53	-91.16	3.265	.870	1.695	797.
	114.	.9523	3097.7	15.84	-98.23	-87.76	3.295	.867	1.705	780.
	116.	.9617	2945.8	15.26	-94.92	-84.34	3.325	.866	1.715	764.
	118.	.9715	2798.4	14.71	-91.58	-80.90	3.354	.865	1.725	747.
	120.	.9816	2655.2	14.16	-88.23	-77.43	3.383	.863	1.737	731.
	122.	.9921	2516.1	13.64	-84.86	-73.95	3.412	.861	1.748	715.
	124.	1.0029	2380.7	13.13	-81.47	-70.44	3.441	.856	1.759	699.
	126.	1.0143	2248.7	12.64	-78.06	-66.91	3.469	.846	1.767	685.
	128.	1.0261	2119.4	12.18	-74.65	-63.36	3.497	.829	1.772	673.
	130.	1.0388	1987.8	11.79	-71.20	-59.77	3.525	.833	1.813	658.
	132.	1.0519	1864.8	11.33	-67.70	-56.13	3.552	.831	1.837	642.
	134.	1.0656	1747.4	10.88	-64.17	-52.44	3.580	.829	1.858	626.
	136.	1.0801	1631.9	10.42	-60.59	-48.71	3.608	.825	1.881	610.
	138.	1.0953	1521.2	9.97	-56.98	-44.93	3.635	.822	1.904	594.
	140.	1.1114	1415.2	9.53	-53.34	-41.11	3.663	.818	1.928	578.
	142.	1.1286	1310.4	9.10	-49.63	-37.22	3.690	.814	1.957	561.
	144.	1.1469	1207.8	8.68	-45.88	-33.27	3.718	.811	1.993	545.
	146.	1.1665	1110.9	8.27	-42.08	-29.25	3.746	.808	2.029	528.
	148.	1.1875	1017.2	7.85	-38.21	-25.15	3.774	.806	2.069	511.
	150.	1.2100	926.9	7.43	-34.29	-20.98	3.802	.804	2.113	494.
	152.	1.2344	840.9	7.04	-30.29	-16.71	3.830	.803	2.166	476.
	154.	1.2610	759.7	6.65	-26.19	-12.32	3.859	.803	2.226	459.
	156.	1.2900	680.6	6.26	-22.01	-7.82	3.888	.803	2.298	441.
	158.	1.3222	608.4	5.88	-17.69	-3.15	3.917	.803	2.371	424.
	160.	1.3578	540.0	5.50	-13.20	1.74	3.948	.809	2.460	405.
	165.	1.4667	390.3	4.59	-1.41	14.72	4.028	.832	2.746	359.
	170.	1.6153	280.1	3.74	11.43	29.20	4.115	.841	3.054	319.
	175.	1.8174	213.7	3.00	25.05	45.04	4.206	.838	3.269	289.
	180.	2.0730	187.2	2.40	38.55	61.35	4.298	.823	3.212	270.
	185.	2.3572	190.1	1.97	50.75	76.68	4.382	.802	2.897	262.
	190.	2.6415	208.4	1.66	61.21	90.27	4.455	.782	2.542	260.
	195.	2.9127	233.6	1.45	70.18	102.22	4.517	.766	2.248	262.
	200.	3.1674	261.3	1.29	78.04	112.88	4.571	.754	2.024	265.
	210.	3.6345	317.6	1.06	91.51	131.49	4.662	.736	1.723	273.
	220.	4.0567	372.0	.915	103.10	147.72	4.737	.723	1.538	281.
	230.	4.4458	423.0	.809	113.52	162.42	4.803	.713	1.416	290.
	240.	4.8114	471.0	.726	123.16	176.09	4.861	.704	1.326	298.
	250.	5.1599	517.1	.662	132.24	189.00	4.914	.696	1.261	306.
	260.	5.4943	561.1	.610	140.91	201.35	4.962	.690	1.210	314.
	270.	5.8173	603.4	.567	149.26	213.25	5.007	.683	1.171	322.
	280.	6.1313	644.2	.531	157.35	224.79	5.049	.678	1.139	329.
	290.	6.4377	683.8	.500	165.23	236.05	5.088	.674	1.113	336.
	300.	6.7380	722.3	.473	172.96	247.08	5.126	.670	1.092	343.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

120. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 55.726	.7610	9133.7	39.79	-192.83	-183.70	2.108	1.100	1.660	1174.
56.	.7617	9101.3	39.60	-192.39	-183.25	2.116	1.100	1.659	1172.
58.	.7667	8865.3	38.27	-189.13	-179.93	2.174	1.094	1.657	1159.
60.	.7718	8630.9	37.03	-185.88	-176.62	2.230	1.087	1.655	1146.
62.	.7769	8398.0	35.87	-182.63	-173.31	2.284	1.080	1.653	1134.
64.	.7821	8166.6	34.78	-179.39	-170.01	2.337	1.072	1.652	1122.
66.	.7874	7936.6	33.74	-176.15	-166.70	2.387	1.063	1.650	1110.
68.	.7927	7708.1	32.74	-172.92	-163.41	2.437	1.054	1.649	1098.
70.	.7980	7481.1	31.79	-169.69	-160.11	2.484	1.045	1.647	1086.
72.	.8035	7255.8	30.87	-166.46	-156.82	2.531	1.036	1.646	1074.
74.	.8090	7032.2	29.99	-163.23	-153.52	2.576	1.026	1.645	1062.
76.	.8147	6810.5	29.13	-160.01	-150.23	2.620	1.016	1.644	1050.
78.	.8204	6590.8	28.30	-156.79	-146.95	2.663	1.006	1.644	1038.
80.	.8262	6373.4	27.49	-153.57	-143.66	2.704	.995	1.643	1026.
82.	.8322	6158.3	26.71	-150.36	-140.37	2.745	.985	1.643	1013.
84.	.8382	5945.7	25.94	-147.15	-137.09	2.784	.975	1.643	1001.
86.	.8444	5735.8	25.18	-143.93	-133.80	2.823	.965	1.643	988.
88.	.8508	5528.7	24.45	-140.72	-130.51	2.861	.955	1.643	975.
90.	.8572	5324.8	23.73	-137.51	-127.22	2.898	.945	1.644	963.
92.	.8639	5124.0	23.02	-134.30	-123.93	2.934	.936	1.645	949.
94.	.8707	4926.7	22.32	-131.09	-120.64	2.969	.926	1.647	936.
96.	.8776	4733.0	21.64	-127.88	-117.34	3.004	.918	1.649	922.
98.	.8847	4543.0	20.96	-124.66	-114.04	3.038	.909	1.651	908.
100.	.8921	4356.9	20.30	-121.44	-110.74	3.071	.902	1.654	894.
102.	.8996	4174.9	19.65	-118.22	-107.42	3.104	.895	1.658	880.
104.	.9073	3997.1	19.01	-114.99	-104.10	3.136	.888	1.662	865.
106.	.9152	3823.6	18.38	-111.76	-100.77	3.168	.883	1.668	850.
108.	.9234	3654.6	17.77	-108.51	-97.43	3.199	.878	1.673	835.
110.	.9318	3490.0	17.16	-105.26	-94.08	3.230	.874	1.680	819.
112.	.9405	3329.9	16.56	-102.00	-90.71	3.260	.872	1.688	803.
114.	.9494	3174.4	15.98	-98.72	-87.33	3.290	.869	1.696	787.
116.	.9586	3023.3	15.41	-95.43	-83.93	3.320	.868	1.706	771.
118.	.9682	2876.7	14.86	-92.12	-80.51	3.349	.867	1.716	755.
120.	.9780	2734.3	14.32	-88.80	-77.06	3.378	.865	1.726	739.
122.	.9882	2596.0	13.80	-85.46	-73.60	3.407	.863	1.736	723.
124.	.9988	2461.4	13.29	-82.10	-70.12	3.435	.857	1.745	708.
126.	1.0098	2330.1	12.81	-78.73	-66.61	3.463	.849	1.752	694.
128.	1.0212	2201.6	12.35	-75.35	-63.10	3.491	.830	1.754	682.
130.	1.0335	2070.5	11.97	-71.95	-59.55	3.518	.834	1.794	668.
132.	1.0461	1948.3	11.51	-68.50	-55.95	3.546	.832	1.815	652.
134.	1.0593	1832.5	11.07	-65.02	-52.31	3.573	.830	1.835	637.
136.	1.0731	1717.1	10.62	-61.50	-48.62	3.601	.826	1.856	621.
138.	1.0877	1607.9	10.18	-57.95	-44.90	3.628	.823	1.875	605.
140.	1.1030	1502.5	9.75	-54.37	-41.14	3.655	.819	1.896	590.
142.	1.1193	1398.6	9.31	-50.74	-37.31	3.682	.815	1.918	574.
144.	1.1365	1296.3	8.91	-47.08	-33.44	3.709	.811	1.950	558.
146.	1.1548	1200.7	8.51	-43.37	-29.52	3.736	.808	1.981	542.
148.	1.1743	1107.9	8.10	-39.61	-25.52	3.763	.806	2.015	526.
150.	1.1951	1018.6	7.70	-35.81	-21.47	3.790	.804	2.051	510.
152.	1.2174	933.6	7.31	-31.94	-17.34	3.818	.802	2.092	493.
154.	1.2416	853.1	6.93	-28.00	-13.10	3.845	.801	2.139	477.
156.	1.2675	774.6	6.57	-24.00	-8.79	3.873	.800	2.195	461.
158.	1.2960	702.2	6.20	-19.89	-4.33	3.902	.800	2.251	445.
160.	1.3271	633.6	5.84	-15.63	.29	3.931	.805	2.320	427.
165.	1.4187	480.8	4.96	-4.64	12.39	4.005	.826	2.528	384.
170.	1.5375	362.1	4.16	7.11	25.57	4.084	.832	2.748	346.
175.	1.6920	280.9	3.43	19.46	39.76	4.166	.828	2.928	315.
180.	1.8862	235.4	2.82	31.95	54.56	4.250	.817	2.982	293.
185.	2.1126	220.1	2.34	43.87	69.22	4.330	.801	2.848	280.
190.	2.3534	225.4	1.97	54.61	82.85	4.403	.783	2.601	274.
195.	2.5939	242.3	1.71	64.09	95.22	4.467	.769	2.345	272.
200.	2.8263	265.0	1.51	72.46	106.38	4.523	.757	2.125	273.
210.	3.2601	316.3	1.23	86.82	125.94	4.619	.740	1.810	278.
220.	3.6559	368.9	1.05	99.06	142.93	4.698	.72	1.606	285.
230.	4.0213	419.9	.921	109.97	158.23	4.766	.717	1.469	293.
240.	4.3648	468.7	.824	120.00	172.38	4.826	.708	1.371	301.
250.	4.6904	514.3	.746	129.39	185.67	4.881	.700	1.295	309.
260.	5.0033	559.0	.685	138.30	198.34	4.930	.692	1.239	316.
270.	5.3052	601.9	.635	146.84	210.50	4.976	.686	1.195	324.
280.	5.5981	643.5	.593	155.09	222.27	5.019	.680	1.160	331.
290.	5.8837	683.7	.558	163.12	233.72	5.059	.674	1.131	339.
300.	6.1633	723.0	.527	170.95	244.91	5.097	.670	1.108	346.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

130. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 55.839	.7606	9169.7	39.80	-192.78	-182.89	2.108	1.101	1.659	1175.
56.	.7610	9150.6	39.68	-192.52	-182.63	2.113	1.101	1.659	1174.
58.	.7661	8915.6	38.36	-189.27	-179.31	2.171	1.095	1.657	1161.
60.	.7711	8682.1	37.12	-186.03	-176.00	2.227	1.089	1.655	1149.
62.	.7762	8450.1	35.96	-182.78	-172.69	2.282	1.081	1.653	1137.
64.	.7814	8219.6	34.86	-179.55	-169.39	2.334	1.073	1.651	1125.
66.	.7866	7990.5	33.82	-176.32	-166.09	2.385	1.064	1.649	1113.
68.	.7919	7762.9	32.83	-173.09	-162.79	2.434	1.056	1.647	1101.
70.	.7972	7536.8	31.87	-169.86	-159.50	2.482	1.046	1.646	1089.
72.	.8026	7312.4	30.96	-166.64	-156.21	2.528	1.037	1.645	1077.
74.	.8081	7089.7	30.08	-163.43	-152.92	2.573	1.027	1.643	1065.
76.	.8137	6868.9	29.22	-160.21	-149.64	2.617	1.017	1.642	1053.
78.	.8194	6650.2	28.39	-157.00	-146.35	2.660	1.007	1.642	1041.
80.	.8252	6433.7	27.58	-153.79	-143.07	2.701	.997	1.641	1029.
82.	.8311	6219.5	26.80	-150.59	-139.79	2.742	.987	1.640	1017.
84.	.8371	6007.8	26.03	-147.39	-136.50	2.781	.976	1.640	1005.
86.	.8432	5798.9	25.28	-144.19	-133.22	2.820	.966	1.640	992.
88.	.8495	5592.8	24.55	-140.99	-129.94	2.858	.956	1.640	979.
90.	.8559	5389.8	23.83	-137.79	-126.66	2.894	.947	1.641	967.
92.	.8624	5190.0	23.12	-134.59	-123.38	2.931	.937	1.642	954.
94.	.8691	4993.6	22.43	-131.39	-120.09	2.966	.928	1.643	940.
96.	.8760	4800.8	21.75	-128.19	-116.80	3.000	.919	1.645	927.
98.	.8830	4611.8	21.08	-124.99	-113.51	3.034	.911	1.647	913.
100.	.8902	4426.6	20.42	-121.79	-110.21	3.068	.903	1.650	899.
102.	.8977	4245.5	19.77	-118.58	-106.91	3.100	.896	1.653	885.
104.	.9053	4068.6	19.13	-115.37	-103.60	3.133	.890	1.657	870.
106.	.9131	3896.0	18.51	-112.15	-100.28	3.164	.885	1.662	855.
108.	.9211	3727.8	17.89	-108.93	-96.96	3.195	.880	1.667	840.
110.	.9294	3564.1	17.29	-105.70	-93.62	3.226	.876	1.673	825.
112.	.9379	3404.8	16.70	-102.45	-90.26	3.256	.873	1.680	809.
114.	.9466	3250.1	16.12	-99.20	-86.89	3.286	.871	1.688	794.
116.	.9557	3099.8	15.56	-95.93	-83.51	3.315	.870	1.697	778.
118.	.9650	2954.0	15.01	-92.65	-80.10	3.345	.869	1.706	762.
120.	.9746	2812.3	14.47	-89.35	-76.68	3.373	.867	1.716	746.
122.	.9845	2674.7	13.95	-86.04	-73.24	3.402	.864	1.725	731.
124.	.9948	2540.8	13.45	-82.71	-69.78	3.430	.859	1.733	716.
126.	1.0055	2410.2	12.97	-79.37	-66.30	3.458	.849	1.738	702.
128.	1.0166	2282.5	12.51	-76.03	-62.82	3.485	.831	1.739	691.
130.	1.0285	2151.9	12.15	-72.68	-59.31	3.512	.835	1.777	677.
132.	1.0406	2030.4	11.69	-69.27	-55.74	3.539	.834	1.796	661.
134.	1.0533	1916.0	11.26	-65.84	-52.14	3.567	.831	1.814	647.
136.	1.0666	1800.7	10.82	-62.37	-48.50	3.594	.827	1.833	632.
138.	1.0806	1692.7	10.38	-58.87	-44.83	3.620	.824	1.850	617.
140.	1.0952	1587.9	9.96	-55.36	-41.12	3.647	.820	1.868	602.
142.	1.1107	1484.6	9.53	-51.79	-37.35	3.674	.816	1.887	586.
144.	1.1270	1382.6	9.12	-48.20	-33.55	3.700	.812	1.913	571.
146.	1.1442	1288.1	8.73	-44.58	-29.70	3.727	.809	1.940	556.
148.	1.1625	1196.1	8.34	-40.91	-25.79	3.753	.806	1.969	540.
150.	1.1818	1107.6	7.95	-37.20	-21.84	3.780	.804	2.000	525.
152.	1.2024	1023.4	7.57	-33.45	-17.82	3.807	.802	2.031	509.
154.	1.2246	943.3	7.20	-29.63	-13.71	3.833	.800	2.068	494.
156.	1.2482	865.6	6.84	-25.78	-9.55	3.860	.799	2.113	478.
158.	1.2739	792.7	6.48	-21.82	-5.26	3.888	.798	2.158	463.
160.	1.3016	723.9	6.14	-17.75	-.83	3.916	.803	2.213	447.
165.	1.3813	569.0	5.30	-7.33	10.62	3.986	.822	2.376	406.
170.	1.4809	444.3	4.52	3.65	22.90	4.059	.826	2.540	370.
175.	1.6058	352.7	3.81	15.08	35.96	4.135	.821	2.681	339.
180.	1.7598	293.2	3.20	26.70	49.57	4.212	.811	2.758	316.
185.	1.9416	262.4	2.69	38.07	63.31	4.287	.799	2.721	299.
190.	2.1421	254.2	2.29	48.73	76.58	4.358	.783	2.576	289.
195.	2.3508	261.1	1.98	58.42	88.98	4.422	.769	2.381	284.
200.	2.5588	277.0	1.74	67.15	100.41	4.480	.758	2.189	283.
210.	2.9569	320.7	1.41	82.22	120.66	4.579	.742	1.881	285.
220.	3.3264	369.9	1.19	95.07	138.31	4.661	.730	1.668	291.
230.	3.6696	420.0	1.04	106.45	154.16	4.732	.721	1.519	297.
240.	3.9928	468.6	.926	116.85	168.76	4.794	.712	1.412	305.
250.	4.2994	515.5	.837	126.55	182.44	4.850	.703	1.331	312.
260.	4.5931	560.1	.765	135.70	195.42	4.901	.695	1.268	320.
270.	4.8754	601.9	.706	144.44	207.82	4.947	.687	1.219	327.
280.	5.1501	643.9	.658	152.85	219.80	4.991	.681	1.180	334.
290.	5.4178	684.8	.617	161.01	231.44	5.032	.675	1.148	341.
300.	5.6796	724.6	.582	168.96	242.79	5.070	.670	1.123	348.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

140. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 55.951	.7603	9205.6	39.80	-192.73	-182.09	2.109	1.102	1.659	1177.
56.	.7604	9199.8	39.77	-192.65	-182.01	2.111	1.102	1.659	1177.
58.	.7654	8965.6	38.44	-189.41	-178.69	2.169	1.096	1.656	1164.
60.	.7704	8733.0	37.20	-186.17	-175.38	2.225	1.090	1.654	1151.
62.	.7755	8502.0	36.04	-182.93	-172.08	2.279	1.082	1.652	1139.
64.	.7806	8272.3	34.95	-179.70	-168.77	2.331	1.074	1.650	1127.
66.	.7858	8044.1	33.90	-176.48	-165.48	2.382	1.066	1.648	1115.
68.	.7911	7817.4	32.91	-173.26	-162.18	2.431	1.057	1.646	1104.
70.	.7964	7592.2	31.96	-170.04	-158.89	2.479	1.047	1.645	1092.
72.	.8017	7368.7	31.05	-166.83	-155.60	2.525	1.038	1.643	1080.
74.	.8072	7146.9	30.16	-163.62	-152.32	2.570	1.028	1.642	1068.
76.	.8127	6927.1	29.31	-160.41	-149.04	2.614	1.018	1.641	1057.
78.	.8184	6709.2	28.48	-157.21	-145.75	2.657	1.008	1.640	1045.
80.	.8241	6493.6	27.67	-154.01	-142.48	2.698	.998	1.639	1033.
82.	.8299	6280.3	26.89	-150.82	-139.20	2.739	.988	1.638	1021.
84.	.8359	6069.6	26.12	-147.62	-135.92	2.778	.978	1.638	1008.
86.	.8420	5861.6	25.38	-144.43	-132.65	2.817	.968	1.637	996.
88.	.8482	5656.4	24.64	-141.25	-129.37	2.854	.958	1.637	983.
90.	.8545	5454.3	23.93	-138.06	-126.10	2.891	.948	1.638	971.
92.	.8610	5255.4	23.22	-134.87	-122.82	2.927	.939	1.638	958.
94.	.8676	5059.9	22.53	-131.69	-119.54	2.962	.929	1.639	945.
96.	.8744	4868.1	21.85	-128.50	-116.26	2.997	.921	1.641	931.
98.	.8814	4679.9	21.18	-125.32	-112.98	3.031	.913	1.643	918.
100.	.8885	4495.6	20.53	-122.13	-109.69	3.064	.905	1.645	904.
102.	.8958	4315.4	19.88	-118.94	-106.40	3.097	.898	1.648	890.
104.	.9033	4139.4	19.25	-115.74	-103.10	3.129	.892	1.652	876.
106.	.9110	3967.6	18.63	-112.54	-99.79	3.160	.886	1.656	861.
108.	.9189	3800.2	18.02	-109.34	-96.47	3.191	.882	1.661	846.
110.	.9270	3637.3	17.42	-106.12	-93.14	3.222	.878	1.667	831.
112.	.9353	3478.9	16.83	-102.90	-89.80	3.252	.875	1.673	815.
114.	.9439	3324.9	16.26	-99.66	-86.45	3.282	.873	1.681	800.
116.	.9528	3175.4	15.70	-96.42	-83.08	3.311	.872	1.689	784.
118.	.9619	3030.2	15.15	-93.16	-79.69	3.340	.871	1.698	769.
120.	.9713	2889.2	14.62	-89.89	-76.29	3.368	.869	1.706	753.
122.	.9810	2752.3	14.10	-86.60	-72.86	3.397	.866	1.715	738.
124.	.9910	2619.0	13.61	-83.30	-69.43	3.425	.861	1.722	724.
126.	1.0014	2489.1	13.13	-79.99	-65.97	3.452	.851	1.726	711.
128.	1.0122	2362.1	12.67	-76.69	-62.52	3.479	.833	1.724	699.
130.	1.0236	2232.1	12.31	-73.38	-59.05	3.506	.836	1.761	686.
132.	1.0354	2111.3	11.87	-70.01	-55.51	3.533	.835	1.779	671.
134.	1.0477	1998.0	11.43	-66.62	-51.95	3.560	.832	1.794	656.
136.	1.0605	1882.8	11.00	-63.19	-48.35	3.587	.829	1.812	642.
138.	1.0739	1775.8	10.57	-59.75	-44.72	3.613	.825	1.827	627.
140.	1.0879	1671.4	10.16	-56.28	-41.05	3.640	.821	1.843	613.
142.	1.1027	1568.6	9.74	-52.78	-37.34	3.666	.817	1.861	598.
144.	1.1181	1466.9	9.32	-49.26	-33.60	3.692	.814	1.880	582.
146.	1.1344	1373.3	8.94	-45.70	-29.82	3.718	.810	1.904	568.
148.	1.1517	1282.0	8.56	-42.11	-25.99	3.744	.807	1.929	554.
150.	1.1698	1194.2	8.19	-38.49	-22.11	3.770	.805	1.956	539.
152.	1.1890	1110.7	7.81	-34.83	-18.19	3.796	.802	1.983	524.
154.	1.2096	1030.9	7.44	-31.12	-14.19	3.822	.800	2.011	509.
156.	1.2313	954.0	7.10	-27.39	-10.15	3.849	.799	2.047	494.
158.	1.2548	880.5	6.75	-23.56	-6.00	3.875	.797	2.085	480.
160.	1.2799	811.4	6.41	-19.64	-1.72	3.902	.801	2.130	464.
165.	1.3508	655.0	5.60	-9.67	9.24	3.969	.820	2.263	425.
170.	1.4369	525.9	4.85	.74	20.86	4.039	.822	2.390	391.
175.	1.5421	426.5	4.15	11.50	33.09	4.110	.817	2.501	361.
180.	1.6690	356.4	3.54	22.42	45.79	4.181	.807	2.574	337.
185.	1.8183	313.0	3.02	33.24	58.69	4.252	.795	2.579	319.
190.	1.9859	292.6	2.59	43.61	71.42	4.320	.782	2.503	306.
195.	2.1651	289.1	2.25	53.30	83.61	4.383	.769	2.367	298.
200.	2.3488	297.0	1.98	62.19	95.08	4.441	.759	2.213	294.
210.	2.7105	331.1	1.60	77.78	115.73	4.542	.744	1.932	293.
220.	3.0536	375.5	1.34	91.15	133.90	4.627	.733	1.720	297.
230.	3.3757	423.4	1.17	102.98	150.24	4.699	.724	1.564	303.
240.	3.6800	471.2	1.03	113.74	165.26	4.763	.715	1.449	309.
250.	3.9690	517.6	.929	123.73	179.29	4.821	.707	1.363	316.
260.	4.2455	562.1	.846	133.13	192.56	4.873	.699	1.296	323.
270.	4.5120	605.6	.779	142.07	205.23	4.921	.690	1.241	330.
280.	4.7692	645.7	.724	150.63	217.40	4.965	.682	1.199	337.
290.	5.0211	687.0	.678	158.92	229.21	5.006	.675	1.165	344.
300.	5.2674	727.3	.639	166.97	240.72	5.045	.670	1.137	351.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

150. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 56.063	.7599	9241.4	39.81	-192.68	-181.28	2.110	1.103	1.658	1179.
58.	.7647	9015.5	38.52	-189.54	-178.07	2.166	1.097	1.656	1166.
60.	.7698	8783.8	37.29	-186.31	-174.76	2.222	1.091	1.653	1154.
62.	.7748	8553.6	36.13	-183.08	-171.46	2.277	1.083	1.651	1142.
64.	.7799	8324.8	35.03	-179.86	-168.16	2.329	1.075	1.649	1130.
66.	.7850	8097.5	33.99	-176.64	-164.86	2.380	1.067	1.647	1118.
68.	.7903	7871.7	33.00	-173.42	-161.57	2.429	1.058	1.645	1106.
70.	.7955	7647.4	32.04	-170.21	-158.28	2.476	1.049	1.643	1095.
72.	.8009	7424.7	31.13	-167.01	-155.00	2.523	1.039	1.642	1083.
74.	.8063	7203.9	30.25	-163.81	-151.71	2.568	1.029	1.640	1071.
76.	.8118	6984.9	29.40	-160.61	-148.43	2.611	1.019	1.639	1060.
78.	.8174	6767.9	28.57	-157.42	-145.16	2.654	1.009	1.638	1048.
80.	.8231	6553.2	27.76	-154.23	-141.88	2.695	.999	1.637	1036.
82.	.8289	6340.8	26.98	-151.04	-138.61	2.736	.989	1.636	1024.
84.	.8348	6131.0	26.22	-147.86	-135.34	2.775	.979	1.635	1012.
86.	.8408	5923.8	25.47	-144.68	-132.07	2.814	.969	1.635	1000.
88.	.8469	5719.5	24.74	-141.50	-128.80	2.851	.959	1.634	987.
90.	.8532	5518.3	24.02	-138.33	-125.53	2.888	.949	1.635	975.
92.	.8596	5320.3	23.32	-135.15	-122.26	2.924	.94	1.635	962.
94.	.8661	5125.8	22.63	-131.98	-118.99	2.959	.931	1.636	949.
96.	.8729	4934.7	21.96	-128.81	-115.71	2.994	.922	1.637	936.
98.	.8797	4747.5	21.29	-125.63	-112.44	3.027	.914	1.638	922.
100.	.8867	4564.1	20.64	-122.46	-109.16	3.060	.907	1.641	909.
102.	.8939	4384.7	20.00	-119.28	-105.87	3.093	.900	1.643	895.
104.	.9013	4209.5	19.37	-116.10	-102.58	3.125	.894	1.647	881.
106.	.9089	4038.5	18.75	-112.92	-99.29	3.156	.888	1.651	866.
108.	.9167	3871.9	18.14	-109.73	-95.98	3.187	.884	1.655	852.
110.	.9246	3709.8	17.55	-106.54	-92.67	3.218	.880	1.661	837.
112.	.9328	3552.1	16.96	-103.33	-89.34	3.248	.877	1.667	821.
114.	.9413	3398.8	16.39	-100.12	-86.00	3.277	.875	1.674	806.
116.	.9499	3250.0	15.84	-96.89	-82.64	3.306	.874	1.681	791.
118.	.9589	3105.5	15.29	-93.65	-79.27	3.335	.872	1.689	775.
120.	.9681	2965.2	14.76	-90.40	-75.88	3.364	.871	1.698	760.
122.	.9775	2828.8	14.25	-87.14	-72.48	3.392	.868	1.705	745.
124.	.9873	2696.2	13.76	-83.87	-69.06	3.420	.862	1.711	731.
126.	.9974	2566.9	13.28	-80.59	-65.63	3.447	.852	1.714	718.
128.	1.0079	2440.6	12.83	-77.32	-62.20	3.474	.834	1.711	708.
130.	1.0191	2311.3	12.47	-74.05	-58.77	3.501	.837	1.745	694.
132.	1.0305	2191.0	12.04	-70.72	-55.26	3.527	.836	1.763	680.
134.	1.0423	2078.8	11.60	-67.37	-51.73	3.554	.834	1.776	665.
136.	1.0547	1963.4	11.18	-63.99	-48.17	3.580	.830	1.793	651.
138.	1.0676	1857.5	10.76	-60.59	-44.58	3.607	.826	1.806	637.
140.	1.0810	1753.3	10.34	-57.17	-40.96	3.633	.822	1.821	623.
142.	1.0952	1651.0	9.94	-53.72	-37.29	3.659	.818	1.837	609.
144.	1.1099	1549.5	9.53	-50.26	-33.61	3.684	.815	1.854	594.
146.	1.1254	1456.7	9.14	-46.76	-29.88	3.710	.811	1.872	580.
148.	1.1417	1366.0	8.77	-43.24	-26.12	3.736	.808	1.894	566.
150.	1.1589	1278.8	8.40	-39.70	-22.31	3.761	.805	1.917	552.
152.	1.1769	1195.7	8.04	-36.12	-18.47	3.787	.803	1.941	538.
154.	1.1961	1116.2	7.68	-32.49	-14.55	3.812	.800	1.964	523.
156.	1.2162	1040.1	7.33	-28.86	-10.62	3.838	.798	1.992	509.
158.	1.2380	965.9	7.00	-25.15	-6.58	3.863	.797	2.024	495.
160.	1.2610	896.4	6.67	-21.35	-2.43	3.890	.801	2.063	480.
165.	1.3251	739.0	5.88	-11.73	8.15	3.955	.818	2.174	443.
170.	1.4013	606.5	5.14	-1.76	19.26	4.021	.820	2.275	410.
175.	1.4923	501.0	4.46	8.48	30.86	4.088	.814	2.363	381.
180.	1.6002	422.6	3.86	18.84	42.85	4.156	.804	2.426	357.
185.	1.7259	369.0	3.33	29.16	55.05	4.223	.792	2.448	338.
190.	1.8678	338.0	2.88	39.20	67.21	4.288	.780	2.411	323.
195.	2.0220	324.6	2.52	48.74	79.07	4.349	.769	2.323	313.
200.	2.1833	324.3	2.22	57.66	90.41	4.407	.759	2.206	307.
210.	2.5097	347.3	1.79	73.57	111.21	4.508	.745	1.963	302.
220.	2.8266	385.7	1.50	87.35	129.75	4.594	.735	1.760	304.
230.	3.1282	430.4	1.29	99.58	146.50	4.669	.727	1.603	308.
240.	3.4147	476.6	1.14	110.68	161.90	4.734	.71	1.484	314.
250.	3.6873	522.0	1.02	120.94	176.25	4.793	.710	1.393	320.
260.	3.9483	566.1	.931	130.58	189.80	4.846	.702	1.322	327.
270.	4.2000	609.5	.854	139.72	202.72	4.895	.693	1.263	333.
280.	4.4438	651.4	.791	148.45	215.11	4.940	.684	1.215	340.
290.	4.6798	690.2	.741	156.84	227.04	4.982	.676	1.181	347.
300.	4.9125	730.9	.697	165.01	238.70	5.022	.669	1.151	355.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

160. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_p J/G-K	VELOCITY OF SOUND M/S
* 56.176	.7596	9277.2	39.82	-192.63	-180.47	2.111	1.104	1.658	1180.
58.	.7641	9065.2	38.61	-189.68	-177.45	2.164	1.099	1.655	1169.
60.	.7691	8834.4	37.37	-186.45	-174.14	2.220	1.092	1.653	1156.
62.	.7741	8605.0	36.21	-183.23	-170.84	2.274	1.084	1.650	1144.
64.	.7792	8377.1	35.11	-180.01	-167.54	2.326	1.076	1.648	1133.
66.	.7843	8150.7	34.07	-176.80	-164.25	2.377	1.068	1.646	1121.
68.	.7895	7925.7	33.08	-173.59	-160.96	2.426	1.059	1.644	1109.
70.	.7947	7702.3	32.13	-170.39	-157.67	2.474	1.050	1.642	1098.
72.	.8000	7480.5	31.22	-167.19	-154.39	2.520	1.040	1.640	1086.
74.	.8054	7260.5	30.33	-164.00	-151.11	2.565	1.030	1.639	1075.
76.	.8108	7042.4	29.48	-160.81	-147.83	2.609	1.021	1.637	1063.
78.	.8164	6826.3	28.66	-157.62	-144.56	2.651	1.011	1.636	1051.
80.	.8220	6612.4	27.85	-154.44	-141.29	2.693	1.000	1.635	1039.
82.	.8278	6400.9	27.07	-151.26	-138.02	2.733	.990	1.634	1028.
84.	.8336	6192.0	26.31	-148.09	-134.75	2.772	.980	1.633	1016.
86.	.8396	5985.7	25.56	-144.92	-131.49	2.811	.970	1.632	1003.
88.	.8457	5782.3	24.83	-141.75	-128.22	2.848	.961	1.632	991.
90.	.8519	5581.9	24.12	-138.59	-124.96	2.885	.951	1.632	979.
92.	.8582	5384.8	23.42	-135.43	-121.70	2.921	.942	1.632	966.
94.	.8647	5191.1	22.73	-132.27	-118.43	2.956	.933	1.632	953.
96.	.8713	5000.9	22.06	-129.11	-115.17	2.990	.924	1.633	940.
98.	.8781	4814.5	21.40	-125.95	-111.90	3.024	.916	1.634	927.
100.	.8850	4631.9	20.75	-122.79	-108.63	3.057	.908	1.636	913.
102.	.8921	4453.3	20.11	-119.62	-105.35	3.089	.902	1.639	900.
104.	.8994	4278.9	19.48	-116.46	-102.07	3.121	.895	1.642	886.
106.	.9069	4108.7	18.87	-113.29	-98.78	3.153	.890	1.645	871.
108.	.9145	3942.9	18.26	-110.12	-95.49	3.183	.886	1.650	857.
110.	.9224	3781.5	17.67	-106.94	-92.18	3.214	.882	1.655	842.
112.	.9304	3624.5	17.09	-103.76	-88.87	3.244	.879	1.661	827.
114.	.9387	3471.9	16.52	-100.56	-85.54	3.273	.877	1.667	812.
116.	.9472	3323.7	15.97	-97.35	-82.20	3.302	.876	1.674	797.
118.	.9559	3179.8	15.43	-94.14	-78.84	3.331	.874	1.682	782.
120.	.9649	3040.1	14.90	-90.91	-75.47	3.359	.873	1.689	767.
122.	.9742	2904.4	14.40	-87.67	-72.08	3.387	.870	1.696	753.
124.	.9838	2772.4	13.90	-84.42	-68.68	3.415	.864	1.701	739.
126.	.9936	2643.7	13.43	-81.17	-65.28	3.442	.854	1.703	726.
128.	1.0038	2517.9	12.98	-77.93	-61.87	3.469	.835	1.698	715.
130.	1.0147	2389.4	12.62	-74.70	-58.47	3.495	.839	1.730	702.
132.	1.0257	2269.6	12.20	-71.40	-54.99	3.522	.837	1.748	688.
134.	1.0372	2158.2	11.77	-68.09	-51.49	3.548	.835	1.760	674.
136.	1.0491	2042.8	11.35	-64.75	-47.96	3.574	.832	1.775	660.
138.	1.0616	1937.7	10.93	-61.39	-44.40	3.600	.829	1.787	647.
140.	1.0745	1833.7	10.53	-58.02	-40.82	3.626	.824	1.800	633.
142.	1.0881	1731.8	10.12	-54.61	-37.20	3.652	.819	1.815	619.
144.	1.1022	1630.6	9.73	-51.20	-33.57	3.677	.816	1.831	605.
146.	1.1170	1538.4	9.33	-47.77	-29.89	3.702	.812	1.843	591.
148.	1.1326	1448.2	8.97	-44.30	-26.18	3.728	.809	1.863	577.
150.	1.1488	1361.5	8.61	-40.83	-22.45	3.753	.806	1.883	564.
152.	1.1658	1278.9	8.25	-37.32	-18.67	3.778	.804	1.904	550.
154.	1.1839	1199.5	7.90	-33.77	-14.83	3.803	.801	1.924	537.
156.	1.2027	1124.2	7.56	-30.22	-10.98	3.828	.799	1.945	523.
158.	1.2229	1049.3	7.23	-26.60	-7.04	3.853	.797	1.973	510.
160.	1.2442	979.4	6.90	-22.90	-2.99	3.878	.801	2.006	495.
165.	1.3029	821.1	6.13	-13.58	7.27	3.941	.818	2.101	459.
170.	1.3715	685.9	5.41	-3.97	17.97	4.005	.818	2.184	428.
175.	1.4520	575.5	4.75	5.85	29.09	4.070	.812	2.257	400.
180.	1.5459	490.4	4.15	15.77	40.51	4.134	.801	2.310	376.
185.	1.6542	428.6	3.62	25.67	52.13	4.198	.790	2.335	356.
190.	1.7762	388.5	3.16	35.37	63.79	4.260	.779	2.320	340.
195.	1.9099	366.2	2.77	44.71	75.27	4.320	.768	2.264	328.
200.	2.0517	357.8	2.46	53.56	86.38	4.376	.759	2.178	320.
210.	2.3451	369.1	1.98	69.61	107.14	4.477	.746	1.975	313.
220.	2.6367	400.4	1.66	83.71	125.89	4.564	.737	1.789	312.
230.	2.9184	440.8	1.43	96.27	142.96	4.640	.729	1.635	314.
240.	3.1880	484.6	1.26	107.68	158.69	4.707	.721	1.515	319.
250.	3.4454	528.5	1.12	118.21	173.33	4.767	.713	1.421	325.
260.	3.6920	572.0	1.02	128.37	187.14	4.821	.705	1.346	331.
270.	3.9304	615.0	.932	137.40	200.29	4.871	.696	1.285	337.
280.	4.1611	656.8	.860	146.31	212.88	4.917	.687	1.234	343.
290.	4.3858	698.0	.800	154.85	225.02	4.959	.678	1.190	350.
300.	4.6059	738.1	.749	163.09	236.79	4.999	.669	1.153	357.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

170. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	Cv J/G-K	Cp J/G-K	VELOCITY OF SOUND M/S
* 56.288	.7592	9312.9	39.82	-192.57	-179.67	2.112	1.105	1.657	1182.
58.	.7635	9114.7	38.69	-189.81	-176.83	2.101	1.100	1.655	1171.
60.	.7684	8884.8	37.45	-186.59	-173.53	2.217	1.093	1.652	1159.
62.	.7734	8656.3	36.29	-183.37	-170.22	2.271	1.085	1.650	1147.
64.	.7785	8429.2	35.20	-180.16	-166.93	2.324	1.077	1.647	1135.
66.	.7835	8203.6	34.16	-176.95	-163.63	2.374	1.069	1.645	1124.
68.	.7887	7979.5	33.16	-173.75	-160.35	2.424	1.060	1.643	1112.
70.	.7939	7756.9	32.21	-170.56	-157.06	2.471	1.051	1.641	1101.
72.	.7992	7536.0	31.30	-167.37	-153.78	2.517	1.041	1.639	1089.
74.	.8045	7316.8	30.42	-164.18	-150.50	2.562	1.032	1.637	1078.
76.	.8099	7099.6	29.57	-161.00	-147.23	2.606	1.022	1.636	1066.
78.	.8154	6884.4	28.74	-157.82	-143.96	2.648	1.012	1.634	1054.
80.	.8210	6671.4	27.94	-154.65	-140.69	2.690	1.002	1.633	1043.
82.	.8267	6460.7	27.16	-151.48	-137.43	2.730	.992	1.631	1031.
84.	.8325	6252.6	26.40	-148.32	-134.17	2.769	.982	1.630	1019.
86.	.8384	6047.2	25.65	-145.16	-130.91	2.808	.972	1.630	1007.
88.	.8444	5844.6	24.93	-142.00	-127.65	2.845	.962	1.629	995.
90.	.8506	5645.1	24.21	-138.85	-124.39	2.882	.952	1.629	983.
92.	.8569	5448.8	23.52	-135.70	-121.13	2.918	.943	1.629	970.
94.	.8633	5255.9	22.83	-132.55	-117.87	2.953	.934	1.629	957.
96.	.8698	5066.6	22.16	-129.40	-114.61	2.987	.926	1.630	944.
98.	.8765	4880.9	21.50	-126.25	-111.35	3.021	.918	1.631	931.
100.	.8834	4699.2	20.85	-123.11	-108.09	3.053	.91	1.632	918.
102.	.8904	4521.4	20.22	-119.96	-104.82	3.086	.903	1.634	904.
104.	.8975	4347.7	19.59	-116.81	-101.55	3.118	.897	1.637	891.
106.	.9049	4178.3	18.98	-113.66	-98.27	3.149	.892	1.640	877.
108.	.9124	4013.2	18.38	-110.50	-94.99	3.180	.887	1.644	862.
110.	.9201	3852.4	17.79	-107.34	-91.70	3.210	.884	1.649	848.
112.	.9281	3696.1	17.22	-104.17	-88.39	3.240	.881	1.655	833.
114.	.9362	3544.2	16.65	-100.99	-85.08	3.269	.879	1.661	818.
116.	.9445	3396.6	16.10	-97.81	-81.75	3.298	.878	1.667	803.
118.	.9531	3253.3	15.56	-94.61	-78.41	3.326	.876	1.674	788.
120.	.9619	3114.2	15.04	-91.40	-75.05	3.355	.875	1.681	774.
122.	.9710	2979.0	14.54	-88.19	-71.68	3.382	.872	1.687	759.
124.	.9803	2847.5	14.05	-84.96	-68.30	3.410	.866	1.692	746.
126.	.9900	2719.4	13.58	-81.74	-64.91	3.437	.855	1.692	733.
128.	.9999	2594.2	13.12	-78.52	-61.52	3.464	.837	1.687	723.
130.	1.0104	2466.5	12.76	-75.33	-58.15	3.490	.840	1.716	710.
132.	1.0212	2347.1	12.35	-72.06	-54.70	3.516	.839	1.733	696.
134.	1.0323	2236.5	11.93	-68.78	-51.23	3.542	.836	1.745	683.
136.	1.0439	2121.0	11.51	-65.48	-47.73	3.568	.833	1.759	669.
138.	1.0559	2016.6	11.10	-62.16	-44.21	3.594	.829	1.770	656.
140.	1.0684	1912.8	10.70	-58.83	-40.66	3.619	.825	1.781	643.
142.	1.0815	1811.2	10.30	-55.47	-37.08	3.645	.821	1.794	629.
144.	1.0950	1710.2	9.92	-52.11	-33.49	3.670	.817	1.810	616.
146.	1.1092	1618.7	9.53	-48.72	-29.86	3.695	.813	1.821	602.
148.	1.1240	1528.8	9.16	-45.31	-26.20	3.720	.810	1.836	588.
150.	1.1394	1442.6	8.80	-41.89	-22.52	3.745	.807	1.853	575.
152.	1.1556	1360.3	8.45	-38.45	-18.80	3.769	.804	1.871	562.
154.	1.1727	1281.0	8.11	-34.97	-15.03	3.794	.802	1.889	549.
156.	1.1904	1206.3	7.78	-31.49	-11.25	3.818	.799	1.907	537.
158.	1.2094	1130.8	7.45	-27.95	-7.39	3.843	.797	1.930	523.
160.	1.2292	1060.4	7.13	-24.34	-3.44	3.868	.801	1.959	509.
165.	1.2835	901.4	6.37	-15.26	6.56	3.929	.817	2.042	475.
170.	1.3460	764.1	5.66	-5.95	16.93	3.991	.814	2.111	444.
175.	1.4183	649.6	5.01	3.54	27.65	4.053	.810	2.170	417.
180.	1.5016	558.8	4.42	13.09	38.62	4.115	.800	2.216	393.
185.	1.5966	490.4	3.89	22.62	49.77	4.176	.789	2.240	373.
190.	1.7033	442.6	3.42	32.01	60.97	4.236	.778	2.236	357.
195.	1.8204	412.4	3.02	41.13	72.08	4.294	.768	2.200	344.
200.	1.9457	396.4	2.69	49.86	82.94	4.349	.759	2.138	334.
210.	2.2095	395.9	2.18	65.94	103.50	4.449	.746	1.972	323.
220.	2.4772	419.4	1.82	80.24	122.35	4.537	.738	1.805	320.
230.	2.7397	454.6	1.56	93.07	139.65	4.614	.731	1.660	321.
240.	2.9932	495.3	1.37	104.76	155.64	4.682	.724	1.541	325.
250.	3.2361	537.4	1.22	115.53	170.54	4.743	.716	1.446	329.
260.	3.4695	579.8	1.11	125.60	184.58	4.798	.708	1.369	335.
270.	3.6955	622.2	1.01	135.12	197.95	4.848	.699	1.305	341.
280.	3.9144	663.7	.932	144.19	210.73	4.895	.690	1.252	347.
290.	4.1276	704.7	.866	152.88	223.05	4.938	.681	1.207	353.
300.	4.3365	744.7	.809	161.25	234.97	4.978	.672	1.167	360.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

180. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	Cv J/G-K	Cp J/G-K	VELOCITY OF SOUND M/S
* 56.399	.7589	9348.6	39.83	-192.52	-178.86	2.112	1.106	1.657	1184.
58.	.7628	9164.1	38.77	-189.94	-176.21	2.159	1.101	1.655	1174.
60.	.7678	8935.0	37.54	-186.73	-172.91	2.215	1.094	1.652	1161.
62.	.7727	8707.3	36.37	-183.51	-169.61	2.269	1.087	1.649	1150.
64.	.7777	8481.1	35.28	-180.31	-166.31	2.321	1.079	1.647	1138.
66.	.7828	8256.3	34.24	-177.11	-163.02	2.372	1.073	1.644	1126.
68.	.7879	8033.1	33.25	-173.91	-159.73	2.421	1.061	1.642	1115.
70.	.7931	7811.3	32.30	-170.73	-156.45	2.469	1.052	1.640	1103.
72.	.7983	7591.2	31.38	-167.54	-153.17	2.515	1.042	1.638	1092.
74.	.8036	7372.9	30.50	-164.36	-149.90	2.560	1.033	1.636	1081.
76.	.8090	7156.5	29.65	-161.19	-146.63	2.603	1.023	1.634	1069.
78.	.8145	6942.1	28.83	-158.02	-143.36	2.646	1.013	1.632	1058.
80.	.8200	6729.9	28.03	-154.86	-140.10	2.687	1.003	1.631	1046.
82.	.8257	6520.1	27.25	-151.70	-136.84	2.727	.993	1.629	1034.
84.	.8314	6312.8	26.49	-148.55	-133.58	2.766	.983	1.628	1023.
86.	.8373	6108.2	25.74	-145.39	-130.32	2.805	.973	1.627	1011.
88.	.8432	5906.5	25.02	-142.25	-127.07	2.842	.963	1.626	999.
90.	.8493	5707.8	24.31	-139.10	-123.82	2.879	.954	1.626	986.
92.	.8555	5512.4	23.61	-135.96	-120.57	2.914	.944	1.626	974.
94.	.8619	5320.3	22.93	-132.83	-117.31	2.949	.936	1.626	961.
96.	.8683	5131.7	22.26	-129.69	-114.06	2.984	.927	1.626	949.
98.	.8749	4946.9	21.60	-126.56	-110.81	3.017	.919	1.627	936.
100.	.8817	4765.8	20.96	-123.42	-107.55	3.050	.912	1.628	923.
102.	.8886	4588.8	20.33	-120.29	-104.29	3.082	.905	1.630	909.
104.	.8957	4415.9	19.71	-117.15	-101.03	3.114	.899	1.633	896.
106.	.9029	4247.2	19.10	-114.02	-97.76	3.145	.894	1.636	882.
108.	.9104	4082.8	18.50	-110.87	-94.49	3.176	.889	1.639	868.
110.	.9180	3922.7	17.91	-107.73	-91.20	3.206	.886	1.644	853.
112.	.9258	3767.0	17.34	-104.58	-87.91	3.236	.883	1.649	839.
114.	.9338	3615.7	16.78	-101.42	-84.61	3.265	.881	1.655	824.
116.	.9419	3468.7	16.23	-98.25	-81.29	3.294	.880	1.661	809.
118.	.9504	3326.0	15.69	-95.07	-77.96	3.322	.879	1.668	795.
120.	.9590	3187.4	15.18	-91.88	-74.62	3.350	.876	1.674	780.
122.	.9679	3052.7	14.67	-88.69	-71.27	3.378	.873	1.679	766.
124.	.9770	2921.8	14.19	-85.49	-67.90	3.405	.868	1.683	753.
126.	.9864	2794.1	13.72	-82.29	-64.53	3.432	.857	1.683	741.
128.	.9961	2669.5	13.27	-79.09	-61.16	3.459	.838	1.676	730.
130.	1.0064	2542.6	12.90	-75.93	-57.82	3.485	.841	1.703	717.
132.	1.0168	2423.6	12.50	-72.70	-54.40	3.511	.840	1.719	704.
134.	1.0277	2313.8	12.09	-69.45	-50.95	3.537	.838	1.731	691.
136.	1.0389	2198.1	11.67	-66.18	-47.48	3.562	.835	1.744	678.
138.	1.0505	2094.3	11.26	-62.90	-43.99	3.588	.831	1.753	665.
140.	1.0626	1990.6	10.87	-59.60	-40.48	3.613	.827	1.764	652.
142.	1.0752	1889.4	10.47	-56.28	-36.93	3.638	.822	1.775	639.
144.	1.0882	1788.6	10.10	-52.97	-33.38	3.663	.818	1.790	625.
146.	1.1018	1697.5	9.72	-49.62	-29.79	3.688	.815	1.800	613.
148.	1.1160	1608.0	9.34	-46.27	-26.18	3.712	.811	1.811	599.
150.	1.1307	1522.2	8.99	-42.90	-22.55	3.737	.808	1.827	586.
152.	1.1461	1440.2	8.65	-39.51	-18.88	3.761	.806	1.842	574.
154.	1.1624	1360.9	8.31	-36.09	-15.17	3.785	.803	1.858	561.
156.	1.1792	1286.7	7.98	-32.67	-11.45	3.809	.800	1.873	549.
158.	1.1970	1210.6	7.65	-29.21	-7.66	3.833	.797	1.893	536.
160.	1.2156	1139.8	7.34	-25.67	-3.79	3.858	.801	1.919	523.
165.	1.2662	980.2	6.60	-16.81	5.98	3.918	.818	1.992	489.
170.	1.3238	841.1	5.90	-7.74	16.09	3.978	.817	2.050	459.
175.	1.3896	723.2	5.25	1.46	26.47	4.039	.810	2.099	433.
180.	1.4645	627.6	4.67	10.71	37.07	4.098	.799	2.134	410.
185.	1.5492	553.6	4.14	19.94	47.82	4.157	.788	2.160	390.
190.	1.6437	499.2	3.67	29.05	58.63	4.215	.777	2.160	373.
195.	1.7475	461.9	3.26	37.94	69.40	4.271	.767	2.138	359.
200.	1.8589	439.1	2.91	46.53	79.99	4.324	.759	2.094	348.
210.	2.0968	427.1	2.37	62.54	100.28	4.423	.747	1.959	335.
220.	2.3424	442.3	1.98	76.96	119.13	4.511	.739	1.812	329.
230.	2.5866	471.7	1.70	90.01	136.57	4.589	.733	1.678	329.
240.	2.8247	508.7	1.49	101.92	152.76	4.658	.726	1.563	331.
250.	3.0540	548.5	1.33	112.91	167.86	4.719	.719	1.468	335.
260.	3.2751	589.6	1.20	123.18	182.14	4.775	.711	1.389	340.
270.	3.4897	631.1	1.09	132.88	195.70	4.827	.702	1.324	345.
280.	3.6976	672.1	1.01	142.11	208.66	4.874	.693	1.269	351.
290.	3.9004	712.8	.932	150.94	221.14	4.918	.684	1.222	357.
300.	4.0990	752.4	.869	159.43	233.21	4.958	.675	1.181	363.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

190. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 56.511	.7585	9384.2	39.84	-192.47	-178.06	2.113	1.107	1.657	1185.
58.	.7622	9213.2	38.86	-190.07	-175.59	2.156	1.102	1.654	1176.
60.	.7671	8985.0	37.62	-186.86	-172.29	2.212	1.095	1.651	1164.
62.	.7720	8758.1	36.46	-183.66	-168.99	2.267	1.088	1.649	1152.
64.	.7770	8532.8	35.36	-180.46	-165.69	2.319	1.080	1.646	1141.
66.	.7821	8308.8	34.32	-177.26	-162.40	2.369	1.071	1.643	1129.
68.	.7871	8086.4	33.33	-174.07	-159.12	2.418	1.062	1.641	1118.
70.	.7923	7865.5	32.38	-170.89	-155.84	2.466	1.053	1.639	1106.
72.	.7975	7646.2	31.47	-167.72	-152.56	2.512	1.044	1.636	1095.
74.	.8027	7428.7	30.59	-164.54	-149.29	2.557	1.034	1.634	1084.
76.	.8081	7213.1	29.74	-161.38	-146.03	2.600	1.024	1.632	1072.
78.	.8135	6999.6	28.91	-158.22	-142.76	2.643	1.014	1.631	1061.
80.	.8190	6788.2	28.11	-155.06	-139.50	2.684	1.004	1.629	1049.
82.	.8246	6579.2	27.33	-151.91	-136.25	2.724	.994	1.627	1038.
84.	.8303	6372.7	26.57	-148.77	-132.99	2.764	.984	1.626	1026.
86.	.8361	6168.9	25.83	-145.63	-129.74	2.802	.974	1.625	1014.
88.	.8420	5968.0	25.11	-142.49	-126.49	2.839	.965	1.624	1002.
90.	.8481	5770.1	24.40	-139.36	-123.24	2.876	.955	1.623	990.
92.	.8542	5575.5	23.71	-136.23	-120.00	2.911	.946	1.623	978.
94.	.8605	5384.1	23.03	-133.10	-116.75	2.946	.937	1.623	966.
96.	.8669	5196.4	22.36	-129.98	-113.51	2.980	.929	1.623	953.
98.	.8734	5012.3	21.71	-126.85	-110.26	3.014	.921	1.623	940.
100.	.8801	4832.0	21.06	-123.73	-107.01	3.047	.913	1.625	927.
102.	.8869	4655.7	20.43	-120.61	-103.76	3.079	.907	1.626	914.
104.	.8939	4483.5	19.81	-117.49	-100.51	3.110	.901	1.628	900.
106.	.9010	4315.5	19.21	-114.37	-97.25	3.141	.895	1.631	887.
108.	.9084	4151.7	18.61	-111.24	-93.98	3.172	.891	1.635	873.
110.	.9158	3992.3	18.03	-108.11	-90.71	3.202	.888	1.639	859.
112.	.9235	3837.2	17.46	-104.97	-87.43	3.232	.885	1.644	844.
114.	.9314	3686.4	16.90	-101.83	-84.13	3.261	.883	1.649	830.
116.	.9394	3540.0	16.35	-98.68	-80.83	3.290	.881	1.655	815.
118.	.9477	3397.8	15.82	-95.52	-77.51	3.318	.880	1.661	801.
120.	.9562	3259.8	15.31	-92.35	-74.18	3.346	.878	1.667	787.
122.	.9649	3125.6	14.81	-89.17	-70.84	3.373	.875	1.672	773.
124.	.9738	2995.1	14.32	-86.00	-67.49	3.401	.869	1.675	760.
126.	.9830	2868.0	13.85	-82.82	-64.14	3.427	.859	1.674	748.
128.	.9925	2743.8	13.41	-79.65	-60.79	3.454	.840	1.666	738.
130.	1.0025	2617.8	13.04	-76.52	-57.47	3.480	.843	1.692	725.
132.	1.0126	2499.1	12.63	-73.32	-54.08	3.505	.842	1.706	712.
134.	1.0232	2389.9	12.24	-70.09	-50.65	3.531	.839	1.718	699.
136.	1.0341	2274.2	11.83	-66.86	-47.21	3.557	.836	1.730	686.
138.	1.0454	2171.0	11.42	-63.61	-43.74	3.582	.832	1.738	673.
140.	1.0570	2067.3	11.03	-60.35	-40.26	3.607	.828	1.748	661.
142.	1.0692	1966.4	10.64	-57.07	-36.75	3.632	.824	1.758	648.
144.	1.0817	1865.8	10.26	-53.79	-33.24	3.657	.820	1.771	635.
146.	1.0949	1775.1	9.90	-50.49	-29.69	3.681	.815	1.781	623.
148.	1.1085	1685.9	9.52	-47.17	-26.11	3.705	.812	1.791	610.
150.	1.1226	1600.4	9.17	-43.86	-22.53	3.729	.809	1.803	597.
152.	1.1373	1518.6	8.83	-40.52	-18.91	3.753	.807	1.816	585.
154.	1.1528	1439.4	8.50	-37.15	-15.25	3.777	.804	1.830	572.
156.	1.1688	1365.6	8.17	-33.79	-11.59	3.801	.801	1.843	561.
158.	1.1856	1289.0	7.85	-30.39	-7.86	3.825	.799	1.860	548.
160.	1.2032	1217.6	7.54	-26.92	-4.06	3.849	.801	1.883	535.
165.	1.2507	1057.6	6.81	-18.24	5.52	3.908	.818	1.949	502.
170.	1.3041	917.0	6.12	-9.38	15.39	3.967	.818	1.999	473.
175.	1.3646	796.1	5.48	-.42	25.50	4.025	.809	2.040	448.
180.	1.4328	696.4	4.90	8.57	35.79	4.083	.798	2.073	425.
185.	1.5092	617.5	4.37	17.53	46.20	4.140	.787	2.092	405.
190.	1.5941	557.4	3.90	26.40	56.68	4.196	.776	2.095	388.
195.	1.6871	514.1	3.49	35.09	67.14	4.250	.767	2.080	373.
200.	1.7870	485.1	3.13	43.51	77.47	4.303	.759	2.047	362.
210.	2.0022	461.9	2.56	59.40	97.44	4.400	.747	1.939	346.
220.	2.2278	468.8	2.14	73.88	116.21	4.488	.740	1.811	339.
230.	2.4547	491.9	1.84	87.08	133.72	4.565	.734	1.690	337.
240.	2.6782	524.6	1.61	99.18	150.07	4.635	.728	1.581	337.
250.	2.8947	561.8	1.43	110.37	165.37	4.697	.721	1.487	340.
260.	3.1043	601.4	1.29	120.82	179.80	4.754	.713	1.408	345.
270.	3.3082	641.7	1.18	130.69	193.55	4.806	.705	1.341	349.
280.	3.5061	682.0	1.08	140.06	206.68	4.854	.696	1.285	355.
290.	3.6993	722.2	1.000	149.02	219.31	4.898	.687	1.236	361.
300.	3.8884	761.3	.931	157.63	231.51	4.939	.678	1.194	366.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

200. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 56.623	.7582	9419.8	39.85	-192.42	-177.25	2.114	1.108	1.656	1187.
58.	.7616	9262.2	38.94	-190.20	-174.97	2.154	1.103	1.654	1178.
60.	.7664	9034.8	37.70	-187.00	-171.67	2.210	1.096	1.651	1166.
62.	.7714	8808.8	36.54	-183.80	-168.37	2.264	1.089	1.648	1155.
64.	.7763	8584.2	35.44	-180.60	-165.08	2.316	1.081	1.645	1143.
66.	.7813	8361.1	34.40	-177.41	-161.79	2.367	1.072	1.643	1132.
68.	.7864	8139.5	33.41	-174.23	-158.51	2.416	1.063	1.640	1120.
70.	.7915	7919.4	32.46	-171.06	-155.23	2.463	1.054	1.638	1109.
72.	.7966	7700.9	31.55	-167.89	-151.95	2.509	1.045	1.635	1098.
74.	.8019	7484.2	30.67	-164.72	-148.69	2.554	1.035	1.633	1087.
76.	.8072	7269.5	29.82	-161.57	-145.42	2.598	1.025	1.631	1075.
78.	.8126	7056.7	29.00	-158.41	-142.16	2.640	1.015	1.629	1064.
80.	.8180	6846.2	28.20	-155.27	-138.90	2.681	1.005	1.627	1053.
82.	.8236	6638.0	27.42	-152.12	-135.65	2.722	.995	1.625	1041.
84.	.8293	6432.3	26.66	-148.99	-132.40	2.761	.985	1.624	1030.
86.	.8350	6229.3	25.92	-145.86	-129.16	2.799	.976	1.622	1018.
88.	.8409	6029.2	25.20	-142.73	-125.91	2.836	.966	1.621	1006.
90.	.8468	5832.0	24.49	-139.60	-122.67	2.873	.957	1.620	994.
92.	.8529	5638.1	23.80	-136.49	-119.43	2.908	.947	1.620	982.
94.	.8591	5447.6	23.12	-133.37	-116.19	2.943	.939	1.619	970.
96.	.8654	5260.6	22.46	-130.26	-112.95	2.977	.930	1.620	957.
98.	.8719	5077.2	21.81	-127.15	-109.71	3.011	.922	1.620	944.
100.	.8785	4897.7	21.17	-124.04	-106.47	3.043	.915	1.621	931.
102.	.8852	4722.1	20.54	-120.93	-103.22	3.075	.908	1.622	918.
104.	.8921	4550.5	19.92	-117.82	-99.98	3.107	.902	1.624	905.
106.	.8992	4383.1	19.32	-114.71	-96.73	3.138	.897	1.627	891.
108.	.9064	4220.0	18.72	-111.60	-93.47	3.168	.893	1.630	878.
110.	.9138	4061.2	18.14	-108.48	-90.21	3.198	.889	1.634	864.
112.	.9213	3906.7	17.57	-105.36	-86.93	3.228	.887	1.638	850.
114.	.9290	3756.5	17.02	-102.23	-83.65	3.257	.885	1.644	835.
116.	.9370	3610.6	16.48	-99.10	-80.36	3.285	.883	1.649	821.
118.	.9451	3468.9	15.95	-95.96	-77.05	3.314	.882	1.655	807.
120.	.9534	3331.4	15.43	-92.81	-73.74	3.342	.880	1.660	793.
122.	.9619	3197.7	14.94	-89.65	-70.41	3.369	.877	1.665	779.
124.	.9707	3067.6	14.45	-86.49	-67.08	3.396	.871	1.667	766.
126.	.9797	2941.0	13.99	-83.33	-63.74	3.423	.861	1.665	754.
128.	.9889	2817.3	13.54	-80.19	-60.41	3.449	.842	1.657	745.
130.	.9987	2692.1	13.18	-77.09	-57.12	3.475	.844	1.681	732.
132.	1.0086	2573.7	12.77	-73.92	-53.74	3.500	.843	1.694	719.
134.	1.0189	2465.1	12.38	-70.72	-50.34	3.526	.841	1.705	707.
136.	1.0294	2349.4	11.98	-67.52	-46.93	3.551	.838	1.718	694.
138.	1.0404	2246.5	11.57	-64.29	-43.48	3.576	.83.	1.724	682.
140.	1.0518	2142.9	11.18	-61.07	-40.03	3.601	.830	1.734	669.
142.	1.0635	2042.2	10.80	-57.82	-36.55	3.626	.825	1.742	657.
144.	1.0756	1941.9	10.43	-54.58	-33.07	3.650	.821	1.754	644.
146.	1.0883	1851.6	10.06	-51.32	-29.55	3.674	.817	1.763	632.
148.	1.1014	1762.6	9.70	-48.04	-26.02	3.699	.814	1.773	620.
150.	1.1150	1677.4	9.34	-44.77	-22.47	3.722	.810	1.781	607.
152.	1.1291	1595.8	9.01	-41.48	-18.90	3.746	.808	1.793	595.
154.	1.1439	1516.5	8.68	-38.16	-15.28	3.770	.805	1.805	583.
156.	1.1591	1442.9	8.36	-34.85	-11.66	3.793	.802	1.816	572.
158.	1.1751	1365.9	8.04	-31.50	-8.00	3.816	.799	1.832	560.
160.	1.1918	1294.1	7.74	-28.09	-4.26	3.840	.802	1.853	547.
165.	1.2366	1133.6	7.01	-19.57	5.16	3.898	.818	1.912	515.
170.	1.2866	991.6	6.33	-10.90	14.83	3.956	.818	1.955	487.
175.	1.3426	868.3	5.70	-2.15	24.70	4.013	.809	1.990	462.
180.	1.4052	765.0	5.12	6.62	34.72	4.069	.798	2.018	440.
185.	1.4749	682.0	4.60	15.35	44.85	4.125	.786	2.034	420.
190.	1.5519	616.8	4.13	24.00	55.04	4.179	.776	2.038	403.
195.	1.6360	568.1	3.71	32.50	65.22	4.232	.767	2.028	388.
200.	1.7263	533.6	3.34	40.78	75.30	4.283	.759	2.004	375.
210.	1.9221	499.9	2.74	56.51	94.95	4.379	.747	1.916	358.
220.	2.1296	498.4	2.31	70.99	113.59	4.466	.740	1.805	349.
230.	2.3405	515.0	1.98	84.29	131.10	4.544	.735	1.696	345.
240.	2.5502	543.1	1.73	96.54	147.54	4.614	.730	1.594	344.
250.	2.7546	577.3	1.54	107.90	162.99	4.677	.723	1.503	346.
260.	2.9535	615.0	1.39	118.52	177.59	4.734	.716	1.424	350.
270.	3.1475	654.0	1.26	128.54	191.49	4.786	.708	1.357	354.
280.	3.3360	693.4	1.16	138.06	204.78	4.835	.699	1.299	359.
290.	3.5203	732.8	1.07	147.15	217.55	4.880	.691	1.250	364.
300.	3.7006	771.4	.994	155.87	229.88	4.921	.680	1.207	370.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMOOYNAMIC PROPERTIES OF OXYGEN

210. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM OERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUNO M/S
* 56.734	.7579	9455.3	39.85	-192.36	-176.45	2.115	1.108	1.656	1188.
58.	.7609	9311.0	39.02	-190.33	-174.35	2.151	1.104	1.654	1181.
60.	.7658	9084.4	37.78	-187.13	-171.05	2.208	1.098	1.650	1169.
62.	.7707	8859.2	36.62	-183.93	-167.75	2.262	1.090	1.647	1157.
64.	.7756	8635.5	35.52	-180.75	-164.46	2.314	1.082	1.644	1146.
66.	.7806	8413.2	34.48	-177.56	-161.17	2.364	1.073	1.642	1134.
68.	.7856	8192.3	33.49	-174.39	-157.89	2.413	1.064	1.639	1123.
70.	.7907	7973.0	32.54	-171.22	-154.62	2.461	1.055	1.636	1112.
72.	.7958	7755.4	31.63	-168.06	-151.34	2.507	1.046	1.634	1101.
74.	.8010	7539.5	30.75	-164.90	-148.08	2.552	1.036	1.632	1090.
76.	.8063	7325.5	29.90	-161.75	-144.82	2.595	1.026	1.629	1078.
78.	.8116	7113.6	29.08	-158.60	-141.56	2.637	1.016	1.627	1067.
80.	.8171	6903.8	28.28	-155.47	-138.31	2.679	1.007	1.625	1056.
82.	.8226	6696.4	27.51	-152.33	-135.06	2.719	.997	1.623	1044.
84.	.8282	6491.5	26.75	-149.20	-131.81	2.758	.987	1.622	1033.
86.	.8339	6289.3	26.01	-146.08	-128.57	2.796	.977	1.620	1021.
88.	.8397	6089.9	25.29	-142.96	-125.33	2.833	.967	1.619	1010.
90.	.8456	5893.6	24.58	-139.85	-122.09	2.870	.958	1.618	998.
92.	.8516	5700.4	23.89	-136.74	-118.86	2.905	.949	1.617	986.
94.	.8578	5510.6	23.22	-133.64	-115.62	2.940	.940	1.617	973.
96.	.8640	5324.3	22.55	-130.53	-112.39	2.974	.932	1.616	961.
98.	.8704	5141.6	21.90	-127.43	-109.16	3.007	.924	1.617	949.
100.	.8769	4962.8	21.27	-124.34	-105.92	3.040	.917	1.617	936.
102.	.8836	4787.9	20.64	-121.24	-102.68	3.072	.910	1.619	923.
104.	.8904	4617.0	20.03	-118.14	-99.45	3.103	.904	1.620	910.
106.	.8974	4450.2	19.42	-115.05	-96.20	3.134	.899	1.623	896.
108.	.9045	4287.7	18.83	-111.95	-92.96	3.165	.895	1.626	883.
110.	.9117	4129.5	18.26	-108.85	-89.70	3.195	.891	1.629	869.
112.	.9192	3975.5	17.69	-105.74	-86.44	3.224	.889	1.633	855.
114.	.9268	3825.9	17.14	-102.63	-83.17	3.253	.887	1.638	841.
116.	.9346	3680.5	16.60	-99.51	-79.88	3.281	.885	1.644	827.
118.	.9425	3539.3	16.07	-96.38	-76.59	3.310	.884	1.649	813.
120.	.9507	3402.2	15.56	-93.25	-73.29	3.337	.882	1.654	799.
122.	.9591	3268.9	15.06	-90.11	-69.97	3.365	.879	1.658	785.
124.	.9677	3139.3	14.58	-86.97	-66.65	3.392	.873	1.660	772.
126.	.9765	3013.1	14.12	-83.84	-63.33	3.418	.862	1.657	761.
128.	.9855	2889.9	13.67	-80.72	-60.02	3.444	.843	1.648	751.
130.	.9951	2765.6	13.32	-77.64	-56.75	3.470	.845	1.671	739.
132.	1.0047	2647.5	12.91	-74.49	-53.39	3.495	.844	1.683	726.
134.	1.0148	2539.3	12.51	-71.32	-50.01	3.521	.842	1.693	714.
136.	1.0250	2423.6	12.12	-68.15	-46.62	3.546	.839	1.706	702.
138.	1.0357	2321.1	11.72	-64.95	-43.20	3.571	.835	1.712	690.
140.	1.0467	2217.6	11.33	-61.76	-39.78	3.595	.831	1.720	677.
142.	1.0581	2117.1	10.95	-58.54	-36.32	3.620	.827	1.728	665.
144.	1.0698	2017.0	10.59	-55.34	-32.88	3.644	.823	1.738	653.
146.	1.0821	1927.0	10.22	-52.11	-29.39	3.668	.819	1.746	641.
148.	1.0947	1838.2	9.87	-48.88	-25.89	3.692	.815	1.755	629.
150.	1.1078	1753.2	9.52	-45.64	-22.38	3.716	.811	1.763	617.
152.	1.1213	1671.7	9.18	-42.39	-18.84	3.739	.809	1.772	605.
154.	1.1355	1592.3	8.85	-39.11	-15.27	3.762	.806	1.783	594.
156.	1.1501	1518.8	8.54	-35.85	-11.70	3.785	.803	1.793	582.
158.	1.1654	1441.6	8.22	-32.56	-8.08	3.808	.800	1.806	571.
160.	1.1812	1369.3	7.92	-29.20	-4.40	3.832	.803	1.825	558.
165.	1.2236	1208.3	7.20	-20.83	4.87	3.889	.819	1.880	527.
170.	1.2707	1065.2	6.53	-12.31	14.37	3.945	.818	1.917	500.
175.	1.3229	939.7	5.91	-3.74	24.04	4.001	.810	1.946	475.
180.	1.3809	833.2	5.33	4.83	33.83	4.057	.798	1.970	453.
185.	1.4450	746.6	4.81	13.37	43.72	4.111	.786	1.983	434.
190.	1.5155	677.0	4.34	21.83	53.65	4.164	.776	1.988	417.
195.	1.5922	623.4	3.91	30.15	63.59	4.215	.766	1.981	401.
200.	1.6745	584.0	3.54	38.28	73.44	4.265	.759	1.962	389.
210.	1.8536	540.6	2.93	53.84	92.76	4.360	.747	1.891	370.
220.	2.0449	530.7	2.47	68.29	111.23	4.446	.741	1.795	359.
230.	2.2411	540.8	2.12	81.64	128.70	4.523	.736	1.697	353.
240.	2.4378	564.0	1.86	94.01	145.20	4.593	.731	1.603	352.
250.	2.6310	595.0	1.65	105.51	160.76	4.657	.726	1.516	353.
260.	2.8198	630.5	1.48	116.28	175.49	4.715	.718	1.438	355.
270.	3.0044	667.8	1.35	126.45	189.54	4.768	.710	1.371	359.
280.	3.1842	706.2	1.23	136.10	202.96	4.817	.702	1.313	364.
290.	3.3601	744.8	1.14	145.31	215.87	4.862	.692	1.262	369.
300.	3.5323	782.7	1.06	154.14	228.32	4.904	.683	1.219	374.

* TWO-PHASE BOUNOARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

220. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	Cv J/G-K	Cp J/G-K	VELOCITY OF SOUND M/S
* 56.845	.7575	9490.8	39.86	-192.31	-175.64	2.116	1.109	1.655	1190.
58.	.7603	9359.7	39.10	-190.46	-173.73	2.149	1.106	1.653	1183.
60.	.7652	9133.8	37.86	-187.26	-170.43	2.205	1.099	1.650	1171.
62.	.7700	8909.5	36.70	-184.07	-167.13	2.259	1.091	1.647	1160.
64.	.7749	8686.5	35.60	-180.89	-163.84	2.311	1.083	1.644	1148.
66.	.7799	8465.0	34.56	-177.71	-160.56	2.362	1.074	1.641	1137.
68.	.7849	8245.0	33.57	-174.54	-157.28	2.411	1.065	1.638	1126.
70.	.7899	8026.5	32.62	-171.38	-154.00	2.458	1.056	1.635	1115.
72.	.7950	7809.6	31.71	-168.23	-150.73	2.504	1.047	1.633	1104.
74.	.8002	7594.5	30.83	-165.08	-147.47	2.549	1.037	1.630	1093.
76.	.8054	7381.3	29.99	-161.93	-144.21	2.592	1.027	1.628	1081.
78.	.8107	7170.1	29.16	-158.79	-140.96	2.635	1.018	1.626	1070.
80.	.8161	6961.1	28.37	-155.66	-137.71	2.676	1.008	1.624	1059.
82.	.8216	6754.5	27.59	-152.54	-134.46	2.716	.998	1.622	1048.
84.	.8271	6550.4	26.84	-149.42	-131.22	2.755	.988	1.620	1036.
86.	.8328	6348.9	26.10	-146.30	-127.98	2.793	.978	1.618	1025.
88.	.8385	6150.3	25.38	-143.19	-124.75	2.830	.969	1.617	1013.
90.	.8444	5954.7	24.67	-140.09	-121.51	2.867	.959	1.615	1001.
92.	.8504	5762.3	23.99	-136.99	-118.28	2.902	.950	1.614	989.
94.	.8564	5573.2	23.31	-133.90	-115.05	2.937	.941	1.614	977.
96.	.8626	5387.6	22.65	-130.81	-111.83	2.971	.933	1.613	965.
98.	.8690	5205.6	22.00	-127.72	-108.60	3.004	.925	1.613	953.
100.	.8754	5027.4	21.36	-124.63	-105.37	3.037	.918	1.614	940.
102.	.8820	4853.2	20.74	-121.55	-102.14	3.069	.912	1.615	927.
104.	.8887	4682.9	20.13	-118.45	-98.91	3.100	.906	1.616	914.
106.	.8956	4516.8	19.53	-115.38	-95.68	3.131	.901	1.619	901.
108.	.9026	4354.9	18.94	-112.29	-92.44	3.161	.897	1.621	887.
110.	.9097	4197.2	18.37	-109.21	-89.19	3.191	.893	1.625	874.
112.	.9171	4043.8	17.80	-106.11	-85.94	3.220	.891	1.629	860.
114.	.9246	3894.6	17.25	-103.02	-82.68	3.249	.889	1.633	846.
116.	.9322	3749.7	16.71	-99.91	-79.40	3.278	.887	1.638	832.
118.	.9400	3609.0	16.19	-96.80	-76.12	3.306	.886	1.643	818.
120.	.9481	3472.3	15.68	-93.69	-72.83	3.333	.884	1.648	805.
122.	.9563	3339.5	15.19	-90.57	-69.53	3.361	.881	1.652	791.
124.	.9647	3210.3	14.71	-87.44	-66.22	3.387	.878	1.653	779.
126.	.9734	3084.4	14.25	-84.33	-62.91	3.414	.864	1.650	767.
128.	.9822	2961.6	13.80	-81.23	-59.62	3.440	.845	1.639	758.
130.	.9915	2838.3	13.45	-78.18	-56.36	3.465	.847	1.661	746.
132.	1.0010	2720.4	13.04	-75.05	-53.03	3.490	.846	1.672	734.
134.	1.0108	2612.7	12.65	-71.91	-49.67	3.516	.844	1.682	722.
136.	1.0208	2497.0	12.26	-68.76	-46.31	3.541	.841	1.694	709.
138.	1.0312	2394.8	11.87	-65.59	-42.91	3.566	.837	1.700	697.
140.	1.0419	2291.3	11.48	-62.43	-39.51	3.590	.833	1.707	685.
142.	1.0530	2191.1	11.10	-59.24	-36.08	3.614	.829	1.714	673.
144.	1.0643	2091.3	10.74	-56.08	-32.66	3.638	.824	1.723	661.
146.	1.0761	2001.4	10.38	-52.88	-29.20	3.662	.820	1.730	650.
148.	1.0884	1912.7	10.03	-49.67	-25.73	3.686	.816	1.739	638.
150.	1.1010	1828.0	9.69	-46.47	-22.25	3.709	.813	1.747	627.
152.	1.1140	1746.6	9.35	-43.26	-18.75	3.732	.810	1.754	615.
154.	1.1277	1667.1	9.02	-40.03	-15.22	3.755	.807	1.763	604.
156.	1.1417	1593.5	8.71	-36.80	-11.69	3.778	.804	1.771	593.
158.	1.1563	1516.1	8.40	-33.56	-8.12	3.801	.801	1.783	581.
160.	1.1714	1443.4	8.10	-30.25	-4.48	3.824	.804	1.801	569.
165.	1.2117	1281.9	7.39	-22.00	4.65	3.880	.819	1.851	538.
170.	1.2562	1137.7	6.72	-13.64	14.00	3.936	.819	1.884	512.
175.	1.3052	1010.4	6.10	-5.22	23.49	3.991	.810	1.908	488.
180.	1.3593	901.1	5.53	3.18	33.08	4.045	.798	1.928	466.
185.	1.4187	811.2	5.01	11.54	42.76	4.098	.786	1.939	447.
190.	1.4837	737.7	4.54	19.83	52.47	4.150	.776	1.943	430.
195.	1.5542	679.8	4.11	27.99	62.19	4.200	.766	1.939	415.
200.	1.6298	635.8	3.73	35.99	71.84	4.249	.759	1.924	402.
210.	1.7943	583.4	3.10	51.36	90.83	4.342	.748	1.865	381.
220.	1.9713	565.4	2.62	65.75	109.12	4.427	.74	1.783	369.
230.	2.1541	569.1	2.26	79.12	126.51	4.504	.737	1.695	362.
240.	2.3387	587.1	1.98	91.58	143.03	4.574	.733	1.609	359.
250.	2.5213	614.8	1.76	103.26	158.67	4.638	.727	1.526	359.
260.	2.7006	647.9	1.58	114.10	173.52	4.697	.721	1.450	361.
270.	2.8764	683.3	1.43	124.40	187.68	4.750	.713	1.384	364.
280.	3.0481	720.5	1.31	134.18	201.23	4.799	.704	1.325	368.
290.	3.2163	758.1	1.21	143.50	214.26	4.845	.695	1.274	373.
300.	3.3809	795.1	1.12	152.44	226.82	4.888	.685	1.230	378.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

230. BAR ISOBAR

TEMPERATURE K	VOLUME CM3/G	ISOTHERM DERIVATIVE BAR-CM3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	Cv J/G-K	Cp J/G-K	VELOCITY OF SOUND M/S
* 56.956	.7572	9526.2	39.87	-192.25	-174.84	2.117	1.110	1.655	1192.
58.	.7597	9408.2	39.19	-190.58	-173.11	2.147	1.107	1.653	1185.
60.	.7645	9183.1	37.95	-187.39	-169.81	2.203	1.100	1.650	1174.
62.	.7694	8959.5	36.78	-184.21	-166.51	2.257	1.092	1.646	1162.
64.	.7742	8737.4	35.69	-181.03	-163.22	2.309	1.084	1.643	1151.
66.	.7792	8516.7	34.65	-177.86	-159.94	2.359	1.075	1.640	1140.
68.	.7841	8297.4	33.65	-174.70	-156.66	2.408	1.067	1.637	1129.
70.	.7891	8079.7	32.70	-171.54	-153.39	2.456	1.057	1.634	1118.
72.	.7942	7863.6	31.79	-168.39	-150.12	2.502	1.048	1.632	1107.
74.	.7993	7649.3	30.92	-165.25	-146.86	2.546	1.038	1.629	1096.
76.	.8045	7436.8	30.07	-162.11	-143.61	2.590	1.029	1.627	1084.
78.	.8098	7226.4	29.25	-158.98	-140.36	2.632	1.019	1.624	1073.
80.	.8152	7018.2	28.45	-155.86	-137.11	2.673	1.009	1.622	1062.
82.	.8206	6812.3	27.68	-152.74	-133.87	2.713	.999	1.620	1051.
84.	.8261	6608.9	26.92	-149.63	-130.63	2.752	.989	1.618	1040.
86.	.8317	6408.2	26.18	-146.52	-127.39	2.790	.98	1.616	1028.
88.	.8374	6210.3	25.47	-143.42	-124.16	2.827	.970	1.614	1017.
90.	.8432	6015.4	24.76	-140.33	-120.93	2.864	.961	1.613	1005.
92.	.8491	5823.7	24.08	-137.24	-117.71	2.899	.952	1.612	993.
94.	.8551	5635.3	23.40	-134.15	-114.49	2.934	.943	1.611	981.
96.	.8613	5450.4	22.74	-131.07	-111.26	2.968	.935	1.610	969.
98.	.8675	5269.1	22.10	-128.00	-108.04	3.001	.927	1.610	957.
100.	.8739	5091.6	21.46	-124.92	-104.82	3.033	.920	1.611	944.
102.	.8804	4918.0	20.84	-121.85	-101.60	3.065	.913	1.611	932.
104.	.8870	4748.3	20.23	-118.78	-98.37	3.097	.907	1.613	919.
106.	.8938	4582.8	19.63	-115.70	-95.15	3.127	.902	1.615	906.
108.	.9007	4421.4	19.05	-112.63	-91.92	3.158	.898	1.617	892.
110.	.9078	4264.3	18.47	-109.56	-88.68	3.187	.895	1.620	879.
112.	.9150	4111.4	17.91	-106.48	-85.43	3.217	.892	1.624	865.
114.	.9224	3962.7	17.37	-103.40	-82.18	3.245	.890	1.629	851.
116.	.9299	3818.3	16.83	-100.31	-78.92	3.274	.889	1.633	837.
118.	.9376	3678.0	16.31	-97.21	-75.65	3.302	.888	1.638	824.
120.	.9455	3541.7	15.80	-94.11	-72.37	3.329	.886	1.642	810.
122.	.9536	3409.3	15.31	-91.01	-69.08	3.356	.883	1.645	797.
124.	.9619	3280.5	14.83	-87.90	-65.78	3.383	.877	1.646	785.
126.	.9703	3155.0	14.37	-84.81	-62.49	3.410	.866	1.643	774.
128.	.9790	3032.6	13.93	-81.72	-59.21	3.435	.847	1.632	764.
130.	.9881	2910.3	13.58	-78.70	-55.97	3.460	.848	1.653	753.
132.	.9974	2792.6	13.17	-75.60	-52.66	3.486	.847	1.663	740.
134.	1.0069	2685.2	12.78	-72.48	-49.32	3.511	.845	1.671	729.
136.	1.0167	2569.6	12.40	-69.36	-45.97	3.536	.842	1.683	717.
138.	1.0268	2467.6	12.01	-66.21	-42.60	3.560	.839	1.689	705.
140.	1.0372	2364.2	11.63	-63.07	-39.22	3.585	.834	1.696	693.
142.	1.0480	2264.1	11.25	-59.92	-35.81	3.609	.830	1.702	681.
144.	1.0590	2164.6	10.89	-56.78	-32.43	3.632	.826	1.710	669.
146.	1.0705	2074.9	10.53	-53.61	-28.99	3.656	.822	1.716	658.
148.	1.0823	1986.3	10.18	-50.44	-25.55	3.680	.818	1.723	647.
150.	1.0945	1901.7	9.85	-47.28	-22.10	3.703	.814	1.731	636.
152.	1.1071	1820.4	9.52	-44.10	-18.63	3.726	.811	1.737	625.
154.	1.1203	1740.7	9.19	-40.90	-15.13	3.749	.808	1.745	613.
156.	1.1337	1666.9	8.87	-37.71	-11.64	3.771	.805	1.752	602.
158.	1.1477	1589.6	8.57	-34.51	-8.11	3.794	.802	1.763	591.
160.	1.1622	1516.4	8.27	-31.25	-4.52	3.816	.805	1.779	579.
165.	1.2007	1354.5	7.57	-23.12	4.50	3.872	.820	1.825	549.
170.	1.2429	1209.2	6.91	-14.88	13.71	3.927	.820	1.856	523.
175.	1.2891	1080.3	6.29	-6.61	23.04	3.981	.811	1.876	500.
180.	1.3398	968.5	5.72	1.64	32.46	4.034	.799	1.891	479.
185.	1.3952	875.8	5.21	9.85	41.94	4.086	.787	1.901	460.
190.	1.4556	798.7	4.73	17.99	51.46	4.137	.776	1.904	443.
195.	1.5208	736.9	4.30	26.00	60.98	4.186	.766	1.900	427.
200.	1.5906	688.9	3.92	33.87	70.45	4.234	.759	1.889	414.
210.	1.7427	627.9	3.28	49.06	89.14	4.325	.748	1.839	393.
220.	1.9068	602.1	2.78	63.37	107.23	4.409	.741	1.769	379.
230.	2.0775	599.7	2.40	76.74	124.52	4.486	.737	1.690	371.
240.	2.2509	612.5	2.10	89.25	141.03	4.557	.734	1.611	367.
250.	2.4236	636.6	1.87	100.97	156.71	4.621	.729	1.533	366.
260.	2.5940	667.0	1.68	111.99	171.66	4.679	.723	1.460	367.
270.	2.7616	700.3	1.52	122.41	185.93	4.733	.715	1.395	370.
280.	2.9256	736.1	1.39	132.30	199.59	4.783	.707	1.336	373.
290.	3.0866	772.5	1.28	141.74	212.73	4.829	.697	1.285	377.
300.	3.2441	808.7	1.19	150.78	225.39	4.872	.688	1.240	382.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

240. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 57.067	.7569	9561.6	39.88	-192.20	-174.03	2.117	1.111	1.655	1193.
58.	.7591	9456.5	39.27	-190.71	-172.49	2.144	1.108	1.653	1188.
60.	.7639	9232.2	38.03	-187.52	-169.19	2.200	1.101	1.649	1176.
62.	.7687	9009.4	36.86	-184.34	-165.89	2.254	1.093	1.646	1165.
64.	.7736	8788.0	35.77	-181.17	-162.61	2.306	1.085	1.643	1153.
66.	.7784	8568.1	34.73	-178.01	-159.32	2.357	1.077	1.639	1142.
68.	.7834	8349.6	33.73	-174.85	-156.05	2.406	1.068	1.636	1131.
70.	.7884	8132.7	32.79	-171.70	-152.78	2.453	1.058	1.633	1120.
72.	.7934	7917.3	31.87	-168.56	-149.51	2.499	1.049	1.631	1109.
74.	.7985	7703.8	31.00	-165.42	-146.25	2.544	1.039	1.628	1098.
76.	.8037	7492.1	30.15	-162.29	-143.00	2.587	1.030	1.625	1087.
78.	.8089	7282.4	29.33	-159.17	-139.75	2.629	1.020	1.623	1076.
80.	.8142	7074.9	28.53	-156.05	-136.51	2.670	1.010	1.620	1065.
82.	.8196	6869.8	27.76	-152.94	-133.27	2.710	1.000	1.618	1054.
84.	.8251	6667.1	27.01	-149.84	-130.04	2.749	.990	1.616	1043.
86.	.8306	6467.1	26.27	-146.74	-126.80	2.787	.981	1.614	1032.
88.	.8363	6270.0	25.55	-143.65	-123.58	2.825	.971	1.612	1020.
90.	.8420	6075.8	24.85	-140.56	-120.35	2.861	.962	1.611	1009.
92.	.8479	5884.8	24.17	-137.48	-117.13	2.896	.953	1.609	997.
94.	.8538	5697.1	23.49	-134.41	-113.92	2.931	.944	1.608	985.
96.	.8599	5512.8	22.84	-131.34	-110.70	2.965	.936	1.608	973.
98.	.8661	5332.2	22.19	-128.27	-107.48	2.998	.928	1.607	961.
100.	.8724	5155.3	21.56	-125.21	-104.27	3.030	.92_	1.608	948.
102.	.8788	4982.3	20.94	-122.14	-101.05	3.062	.915	1.608	936.
104.	.8854	4813.2	20.33	-119.08	-97.84	3.093	.909	1.609	923.
106.	.8921	4648.3	19.74	-116.02	-94.61	3.124	.904	1.611	910.
108.	.8989	4487.4	19.15	-112.96	-91.39	3.154	.900	1.613	897.
110.	.9059	4330.8	18.58	-109.90	-88.16	3.184	.897	1.616	884.
112.	.9130	4178.4	18.02	-106.84	-84.92	3.213	.894	1.620	870.
114.	.9203	4030.2	17.48	-103.77	-81.68	3.242	.892	1.624	856.
116.	.9277	3886.2	16.94	-100.69	-78.43	3.270	.891	1.628	843.
118.	.9353	3746.3	16.42	-97.61	-75.17	3.298	.890	1.633	829.
120.	.9430	3610.4	15.92	-94.53	-71.90	3.325	.888	1.637	816.
122.	.9510	3478.4	15.43	-91.44	-68.62	3.352	.885	1.640	803.
124.	.9591	3349.9	14.95	-88.35	-65.33	3.379	.879	1.640	791.
126.	.9674	3224.9	14.49	-85.27	-62.05	3.405	.868	1.636	780.
128.	.9759	3102.8	14.05	-82.21	-58.79	3.431	.849	1.624	771.
130.	.9848	2981.5	13.71	-79.21	-55.57	3.456	.850	1.645	760.
132.	.9939	2864.0	13.30	-76.13	-52.28	3.481	.848	1.653	747.
134.	1.0032	2756.9	12.91	-73.03	-48.95	3.506	.846	1.661	736.
136.	1.0127	2641.4	12.53	-69.93	-45.63	3.531	.844	1.673	724.
138.	1.0226	2539.6	12.15	-66.81	-42.27	3.555	.840	1.679	712.
140.	1.0328	2436.2	11.77	-63.70	-38.91	3.579	.836	1.685	701.
142.	1.0433	2336.4	11.39	-60.57	-35.53	3.603	.832	1.690	689.
144.	1.0539	2237.2	11.03	-57.46	-32.17	3.627	.827	1.697	677.
146.	1.0651	2147.5	10.68	-54.32	-28.76	3.650	.823	1.702	666.
148.	1.0766	2059.0	10.33	-51.18	-25.35	3.674	.819	1.708	655.
150.	1.0883	1974.6	10.00	-48.04	-21.92	3.697	.815	1.715	645.
152.	1.1005	1893.3	9.67	-44.90	-18.49	3.719	.812	1.722	634.
154.	1.1132	1813.4	9.35	-41.74	-15.02	3.742	.809	1.729	623.
156.	1.1262	1739.2	9.04	-38.56	-11.55	3.764	.806	1.735	612.
158.	1.1397	1662.0	8.73	-35.42	-8.07	3.787	.803	1.745	601.
160.	1.1535	1588.4	8.43	-32.20	-4.51	3.809	.806	1.760	589.
165.	1.1904	1426.0	7.73	-24.17	4.40	3.864	.821	1.802	559.
170.	1.2306	1279.8	7.08	-16.05	13.48	3.918	.820	1.830	534.
175.	1.2744	1149.5	6.47	-7.90	22.68	3.971	.811	1.847	511.
180.	1.3221	1035.5	5.91	.21	31.94	4.024	.799	1.859	491.
185.	1.3741	940.2	5.39	8.28	41.26	4.075	.787	1.867	472.
190.	1.4305	859.9	4.92	16.27	50.61	4.125	.776	1.869	455.
195.	1.4912	794.5	4.49	24.16	59.95	4.173	.767	1.866	440.
200.	1.5560	742.8	4.10	31.91	69.25	4.220	.759	1.856	426.
210.	1.6972	674.0	3.45	46.92	87.65	4.310	.748	1.815	404.
220.	1.8500	640.6	2.93	61.14	105.54	4.393	.742	1.754	389.
230.	2.0097	632.2	2.54	74.49	122.72	4.470	.738	1.683	380.
240.	2.1728	640.0	2.23	87.04	139.18	4.540	.735	1.611	375.
250.	2.3362	660.3	1.98	98.83	154.90	4.604	.730	1.538	373.
260.	2.4983	687.7	1.77	109.95	169.91	4.663	.725	1.468	373.
270.	2.6581	718.9	1.61	120.48	184.27	4.717	.717	1.404	375.
280.	2.8150	753.1	1.47	130.47	198.03	4.767	.709	1.346	378.
290.	2.9691	788.2	1.35	140.01	211.27	4.813	.700	1.294	382.
300.	3.1201	823.4	1.25	149.15	224.03	4.857	.690	1.249	386.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

250. BAR ISOBAR

TEMPERATURE K	VOLUME CM3/G	ISOTHERM OERIVATIVE BAR-CM3/G	ISOCHORE OERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 57.178	.7565	9596.9	39.88	-192.14	-173.23	2.118	1.112	1.654	1195.
58.	.7585	9504.6	39.35	-190.83	-171.87	2.142	1.109	1.653	1193.
60.	.7633	9281.1	38.11	-187.65	-168.57	2.198	1.102	1.649	1178.
62.	.7681	9059.1	36.94	-184.48	-165.28	2.252	1.094	1.645	1167.
64.	.7729	8838.5	35.85	-181.31	-161.99	2.304	1.086	1.642	1156.
66.	.7777	8619.3	34.81	-178.15	-158.71	2.355	1.078	1.639	1145.
68.	.7827	8401.6	33.81	-175.00	-155.43	2.403	1.069	1.636	1134.
70.	.7876	8185.4	32.87	-171.86	-152.17	2.451	1.060	1.633	1123.
72.	.7926	7970.8	31.95	-168.72	-148.90	2.497	1.050	1.630	1112.
74.	.7977	7758.0	31.08	-165.59	-145.65	2.541	1.041	1.627	1101.
76.	.8028	7547.1	30.23	-162.47	-142.39	2.585	1.031	1.624	1090.
78.	.8080	7338.2	29.41	-159.35	-139.15	2.627	1.021	1.621	1079.
80.	.8133	7131.4	28.62	-156.24	-135.91	2.668	1.011	1.619	1068.
82.	.8186	6927.0	27.84	-153.14	-132.67	2.708	1.001	1.616	1057.
84.	.8241	6725.1	27.09	-150.04	-129.44	2.747	.992	1.614	1046.
86.	.8296	6525.8	26.36	-146.95	-126.21	2.785	.982	1.612	1035.
88.	.8352	6329.3	25.64	-143.87	-122.99	2.822	.973	1.610	1024.
90.	.8409	6135.8	24.94	-140.79	-119.77	2.858	.963	1.608	1012.
92.	.8467	5945.5	24.25	-137.72	-116.56	2.893	.954	1.607	1001.
94.	.8526	5758.4	23.58	-134.66	-113.34	2.928	.946	1.606	989.
96.	.8586	5574.8	22.93	-131.60	-110.13	2.962	.938	1.605	977.
98.	.8647	5394.8	22.28	-128.54	-106.92	2.995	.930	1.604	965.
100.	.8709	5218.6	21.65	-125.49	-103.71	3.027	.923	1.604	952.
102.	.8773	5046.1	21.04	-122.44	-100.50	3.059	.916	1.605	940.
104.	.8838	4877.7	20.43	-119.39	-97.29	3.090	.911	1.606	927.
106.	.8904	4713.2	19.84	-116.34	-94.08	3.121	.906	1.607	915.
108.	.8971	4552.9	19.26	-113.29	-90.86	3.151	.902	1.610	901.
110.	.9040	4396.8	18.69	-110.24	-87.64	3.180	.898	1.612	888.
112.	.9110	4244.9	18.13	-107.19	-84.41	3.209	.896	1.616	875.
114.	.9182	4097.1	17.59	-104.13	-81.18	3.238	.894	1.620	861.
116.	.9255	3953.6	17.05	-101.07	-77.93	3.266	.893	1.624	848.
118.	.9330	3814.1	16.54	-98.01	-74.68	3.294	.892	1.628	835.
120.	.9406	3678.5	16.03	-94.94	-71.42	3.321	.890	1.632	821.
122.	.9484	3546.8	15.54	-91.86	-68.15	3.348	.887	1.634	809.
124.	.9564	3418.8	15.07	-88.79	-64.88	3.375	.881	1.634	797.
126.	.9645	3294.0	14.61	-85.73	-61.61	3.401	.870	1.630	786.
128.	.9729	3172.3	14.17	-82.68	-58.36	3.427	.850	1.617	777.
130.	.9816	3052.0	13.83	-79.70	-55.16	3.452	.852	1.637	766.
132.	.9905	2934.7	13.42	-76.64	-51.88	3.477	.850	1.645	754.
134.	.9996	2827.8	13.03	-73.56	-48.57	3.501	.847	1.652	742.
136.	1.0089	2712.5	12.66	-70.50	-45.27	3.526	.845	1.663	731.
138.	1.0186	2610.9	12.28	-67.40	-41.93	3.550	.842	1.669	720.
140.	1.0285	2507.5	11.91	-64.30	-38.59	3.574	.838	1.675	708.
142.	1.0387	2407.8	11.53	-61.20	-35.23	3.598	.833	1.679	697.
144.	1.0490	2308.9	11.17	-58.12	-31.89	3.621	.829	1.686	685.
146.	1.0599	2219.3	10.82	-55.01	-28.51	3.645	.825	1.689	674.
148.	1.0710	2130.9	10.48	-51.90	-25.12	3.668	.821	1.695	663.
150.	1.0825	2046.6	10.15	-48.79	-21.73	3.691	.817	1.701	653.
152.	1.0943	1965.2	9.83	-45.67	-18.32	3.713	.813	1.708	642.
154.	1.1066	1885.2	9.51	-42.54	-14.88	3.736	.810	1.714	632.
156.	1.1191	1810.5	9.20	-39.42	-11.44	3.758	.807	1.720	621.
158.	1.1321	1733.4	8.89	-36.29	-7.99	3.780	.804	1.728	610.
160.	1.1454	1659.6	8.60	-33.11	-4.47	3.802	.807	1.742	598.
165.	1.1808	1496.6	7.90	-25.18	4.34	3.856	.822	1.780	569.
170.	1.2192	1349.5	7.26	-17.16	13.32	3.910	.821	1.807	545.
175.	1.2608	1217.9	6.65	-9.13	22.39	3.963	.812	1.821	523.
180.	1.3059	1102.0	6.08	-1.14	31.51	4.014	.800	1.830	502.
185.	1.3549	1004.3	5.57	6.81	40.68	4.064	.788	1.835	484.
190.	1.4078	921.1	5.10	14.68	49.87	4.113	.776	1.838	467.
195.	1.4647	852.5	4.67	22.44	59.06	4.161	.767	1.835	452.
200.	1.5252	797.3	4.28	30.08	68.21	4.207	.759	1.826	438.
210.	1.6569	721.3	3.61	44.92	86.34	4.296	.748	1.791	416.
220.	1.7996	680.7	3.09	59.03	104.02	4.378	.742	1.739	399.
230.	1.9493	666.6	2.67	72.35	121.09	4.454	.738	1.675	389.
240.	2.1030	669.4	2.35	84.92	137.49	4.524	.735	1.609	383.
250.	2.2578	685.7	2.09	96.77	153.22	4.588	.732	1.541	380.
260.	2.4121	710.1	1.87	107.98	168.28	4.647	.726	1.474	380.
270.	2.5646	738.9	1.70	118.60	182.71	4.701	.719	1.413	381.
280.	2.7147	771.4	1.55	128.69	196.56	4.752	.711	1.355	383.
290.	2.8624	805.1	1.43	138.33	209.89	4.799	.702	1.303	387.
300.	3.0072	839.3	1.32	147.55	222.73	4.842	.693	1.258	390.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

260. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 57.288	.7562	9632.2	39.89	-192.09	-172.43	2.119	1.113	1.654	1197.
58.	.7579	9552.6	39.43	-190.96	-171.25	2.140	1.110	1.652	1192.
60.	.7626	9329.9	38.19	-187.78	-167.95	2.195	1.103	1.649	1181.
62.	.7674	9108.6	37.02	-184.61	-164.66	2.249	1.095	1.645	1170.
64.	.7722	8888.8	35.93	-181.45	-161.37	2.302	1.087	1.641	1158.
66.	.7770	8670.4	34.89	-178.29	-158.09	2.352	1.079	1.638	1147.
68.	.7819	8453.4	33.89	-175.15	-154.82	2.401	1.070	1.635	1137.
70.	.7869	8237.9	32.94	-172.01	-151.55	2.448	1.061	1.632	1126.
72.	.7918	8024.1	32.03	-168.88	-148.29	2.494	1.051	1.629	1115.
74.	.7969	7812.0	31.16	-165.76	-145.04	2.539	1.042	1.626	1104.
76.	.8020	7601.8	30.31	-162.64	-141.79	2.582	1.032	1.623	1093.
78.	.8071	7393.6	29.49	-159.53	-138.54	2.624	1.022	1.620	1082.
80.	.8124	7187.6	28.70	-156.43	-135.31	2.665	1.012	1.617	1072.
82.	.8177	6983.9	27.92	-153.33	-132.07	2.705	1.003	1.615	1061.
84.	.8231	6782.7	27.17	-150.25	-128.85	2.744	.993	1.612	1049.
86.	.8285	6584.1	26.44	-147.17	-125.62	2.782	.983	1.610	1038.
88.	.8341	6388.3	25.72	-144.09	-122.40	2.819	.974	1.608	1027.
90.	.8397	6195.5	25.03	-141.02	-119.19	2.855	.965	1.606	1016.
92.	.8455	6005.8	24.34	-137.96	-115.98	2.890	.956	1.605	1004.
94.	.8513	5819.4	23.67	-134.90	-112.77	2.925	.947	1.603	992.
96.	.8573	5636.4	23.02	-131.85	-109.56	2.959	.939	1.602	981.
98.	.8633	5457.1	22.38	-128.81	-106.36	2.992	.931	1.602	969.
100.	.8695	5281.4	21.75	-125.76	-103.16	3.024	.924	1.602	957.
102.	.8758	5109.5	21.13	-122.72	-99.95	3.056	.918	1.602	944.
104.	.8822	4941.6	20.53	-119.68	-96.75	3.087	.912	1.603	932.
106.	.8887	4777.7	19.94	-116.65	-93.54	3.117	.908	1.604	919.
108.	.8954	4617.9	19.36	-113.61	-90.33	3.147	.903	1.606	906.
110.	.9022	4462.3	18.79	-110.57	-87.12	3.177	.900	1.609	893.
112.	.9091	4310.8	18.24	-107.53	-83.90	3.206	.898	1.612	880.
114.	.9161	4163.5	17.69	-104.49	-80.67	3.234	.896	1.615	866.
116.	.9233	4020.3	17.16	-101.44	-77.43	3.263	.895	1.619	853.
118.	.9307	3881.2	16.65	-98.39	-74.19	3.290	.893	1.623	840.
120.	.9382	3746.0	16.15	-95.33	-70.94	3.318	.892	1.627	827.
122.	.9459	3614.7	15.66	-92.28	-67.68	3.345	.888	1.629	814.
124.	.9537	3486.9	15.19	-89.22	-64.42	3.371	.882	1.628	802.
126.	.9617	3362.5	14.73	-86.17	-61.17	3.397	.871	1.623	791.
128.	.9699	3241.1	14.29	-83.14	-57.92	3.423	.852	1.611	783.
130.	.9785	3121.8	13.96	-80.19	-54.75	3.447	.853	1.630	772.
132.	.9872	3004.7	13.55	-77.15	-51.48	3.472	.851	1.637	760.
134.	.9962	2898.0	13.16	-74.08	-48.18	3.497	.849	1.643	749.
136.	1.0052	2782.9	12.79	-71.04	-44.90	3.521	.846	1.653	737.
138.	1.0147	2681.4	12.41	-67.96	-41.58	3.545	.843	1.660	727.
140.	1.0243	2578.0	12.04	-64.89	-38.26	3.569	.839	1.665	715.
142.	1.0343	2478.5	11.67	-61.81	-34.92	3.593	.835	1.669	704.
144.	1.0443	2380.0	11.31	-58.76	-31.60	3.616	.830	1.675	693.
146.	1.0549	2290.4	10.96	-55.67	-28.24	3.639	.826	1.678	682.
148.	1.0658	2201.9	10.62	-52.58	-24.87	3.662	.822	1.683	671.
150.	1.1769	2117.7	10.29	-49.50	-21.50	3.685	.818	1.688	661.
152.	1.0883	2036.4	9.97	-46.41	-18.12	3.707	.814	1.693	651.
154.	1.1002	1956.1	9.66	-43.31	-14.71	3.730	.811	1.700	640.
156.	1.1124	1880.8	9.35	-40.22	-11.30	3.752	.808	1.705	630.
158.	1.1249	1804.0	9.05	-37.13	-7.88	3.773	.805	1.713	619.
160.	1.1377	1729.9	8.75	-33.98	-4.40	3.795	.808	1.726	608.
165.	1.1717	1566.4	8.06	-26.14	4.33	3.849	.823	1.761	579.
170.	1.2085	1418.3	7.42	-18.22	13.20	3.902	.822	1.785	555.
175.	1.2482	1285.6	6.81	-10.29	22.16	3.954	.813	1.797	533.
180.	1.2911	1168.1	6.25	-2.41	31.15	4.005	.801	1.805	513.
185.	1.3375	1068.2	5.74	5.43	40.20	4.054	.788	1.808	495.
190.	1.3873	982.3	5.27	13.18	49.25	4.103	.777	1.810	478.
195.	1.4407	910.7	4.84	20.84	58.30	4.150	.767	1.807	463.
200.	1.4975	852.4	4.45	28.37	67.31	4.195	.759	1.799	449.
210.	1.6208	769.5	3.77	43.04	85.19	4.282	.749	1.769	426.
220.	1.7546	722.2	3.23	57.05	102.67	4.364	.742	1.723	409.
230.	1.8953	702.6	2.81	70.33	119.61	4.439	.739	1.665	398.
240.	2.0403	700.5	2.47	82.89	135.94	4.509	.736	1.606	391.
250.	2.1872	712.8	2.20	94.79	151.66	4.573	.733	1.542	387.
260.	2.3341	734.0	1.97	106.07	166.75	4.632	.728	1.479	386.
270.	2.4797	760.3	1.79	116.77	181.24	4.687	.721	1.419	387.
280.	2.6235	790.9	1.63	126.95	195.17	4.737	.713	1.363	389.
290.	2.7652	823.2	1.50	136.68	208.57	4.784	.705	1.312	392.
300.	2.9042	856.3	1.39	145.98	221.49	4.828	.695	1.266	395.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

270. BAR ISOBAR

TEMPERATURE K	VOLUME CM3/G	ISOTHERM DERIVATIVE BAR-CM3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 57.399	.7559	9667.4	39.90	-192.03	-171.62	2.120	1.113	1.653	1198.
58.	.7573	9600.4	39.51	-191.08	-170.63	2.137	1.111	1.652	1195.
60.	.7620	9376.4	38.27	-187.90	-167.33	2.193	1.104	1.648	1183.
62.	.7668	9158.0	37.10	-184.74	-164.04	2.247	1.096	1.644	1172.
64.	.7715	8938.9	36.01	-181.58	-160.75	2.299	1.088	1.641	1161.
66.	.7764	8721.2	34.96	-178.44	-157.47	2.350	1.080	1.637	1150.
68.	.7812	8505.0	33.97	-175.30	-154.20	2.398	1.071	1.634	1139.
70.	.7861	8290.3	33.02	-172.16	-150.94	2.446	1.062	1.631	1128.
72.	.7911	8077.2	32.11	-169.04	-147.68	2.492	1.052	1.628	1118.
74.	.7961	7865.8	31.24	-165.92	-144.43	2.536	1.043	1.624	1107.
76.	.8011	7656.3	30.39	-162.81	-141.18	2.580	1.033	1.621	1096.
78.	.8062	7448.8	29.57	-159.71	-137.94	2.622	1.023	1.619	1085.
80.	.8114	7243.5	28.78	-156.61	-134.71	2.663	1.014	1.616	1075.
82.	.8167	7040.5	28.01	-153.53	-131.48	2.702	1.004	1.613	1064.
84.	.8221	6840.0	27.25	-150.45	-128.25	2.741	.994	1.611	1053.
86.	.8275	6642.1	26.52	-147.37	-125.03	2.779	.985	1.608	1042.
88.	.8330	6447.0	25.81	-144.31	-121.82	2.816	.975	1.606	1030.
90.	.8386	6254.8	25.11	-141.25	-118.61	2.852	.966	1.604	1019.
92.	.8443	6065.8	24.43	-138.19	-115.40	2.887	.957	1.602	1008.
94.	.8501	5880.0	23.76	-135.15	-112.20	2.922	.947	1.601	996.
96.	.8560	5697.7	23.11	-132.11	-108.99	2.956	.941	1.600	984.
98.	.8620	5518.9	22.47	-129.07	-105.79	2.989	.933	1.599	973.
100.	.8681	5343.8	21.84	-126.03	-102.60	3.021	.926	1.599	960.
102.	.8743	5172.5	21.23	-123.01	-99.40	3.053	.920	1.599	948.
104.	.8806	5005.1	20.62	-119.98	-96.20	3.084	.914	1.599	936.
106.	.8871	4841.7	20.03	-116.95	-93.00	3.114	.909	1.601	923.
108.	.8936	4682.4	19.46	-113.93	-89.80	3.144	.905	1.603	910.
110.	.9003	4527.2	18.89	-110.90	-86.59	3.173	.902	1.605	898.
112.	.9072	4376.2	18.34	-107.87	-83.38	3.202	.900	1.608	884.
114.	.9141	4229.3	17.80	-104.84	-80.16	3.231	.898	1.611	871.
116.	.9212	4086.5	17.27	-101.81	-76.93	3.259	.897	1.615	858.
118.	.9285	3947.7	16.76	-98.77	-73.70	3.287	.895	1.619	845.
120.	.9359	3812.9	16.26	-95.72	-70.45	3.314	.894	1.622	832.
122.	.9434	3681.9	15.77	-92.68	-67.21	3.341	.890	1.624	819.
124.	.9511	3554.4	15.30	-89.64	-63.95	3.367	.884	1.623	808.
126.	.9590	3430.3	14.85	-86.60	-60.71	3.393	.873	1.618	797.
128.	.9671	3309.3	14.41	-83.59	-57.46	3.418	.854	1.605	789.
130.	.9755	3190.9	14.08	-80.66	-54.32	3.443	.855	1.623	778.
132.	.9840	3074.0	13.67	-77.64	-51.07	3.468	.853	1.629	766.
134.	.9928	2967.4	13.28	-74.59	-47.79	3.492	.850	1.635	755.
136.	1.0016	2852.7	12.91	-71.57	-44.52	3.517	.847	1.644	744.
138.	1.0109	2751.2	12.54	-68.51	-41.22	3.541	.844	1.651	733.
140.	1.0203	2647.9	12.17	-65.47	-37.92	3.565	.841	1.656	722.
142.	1.0300	2548.5	11.80	-62.41	-34.60	3.588	.836	1.660	711.
144.	1.0399	2450.4	11.45	-59.37	-31.30	3.611	.832	1.665	700.
146.	1.0502	2360.7	11.10	-56.31	-27.95	3.634	.828	1.667	690.
148.	1.0607	2272.2	10.75	-53.25	-24.61	3.657	.823	1.671	679.
150.	1.0715	2188.1	10.43	-50.19	-21.26	3.679	.820	1.675	669.
152.	1.0827	2106.7	10.11	-47.13	-17.90	3.702	.816	1.680	659.
154.	1.0942	2026.2	9.80	-44.06	-14.52	3.724	.812	1.687	649.
156.	1.1060	1950.1	9.50	-41.00	-11.14	3.746	.809	1.692	638.
158.	1.1180	1873.7	9.20	-37.93	-7.75	3.767	.806	1.699	628.
160.	1.1304	1799.4	8.91	-34.82	-4.29	3.789	.809	1.711	617.
165.	1.1632	1635.3	8.21	-27.05	4.35	3.842	.824	1.744	588.
170.	1.1985	1486.3	7.58	-19.22	13.14	3.895	.823	1.766	565.
175.	1.2365	1352.7	6.98	-11.39	22.00	3.946	.814	1.777	543.
180.	1.2773	1233.6	6.42	-3.61	30.88	3.996	.802	1.782	524.
185.	1.3214	1131.8	5.90	4.12	39.80	4.045	.789	1.783	506.
190.	1.3686	1043.4	5.43	11.77	48.72	4.093	.777	1.784	489.
195.	1.4190	969.1	5.00	19.33	57.64	4.139	.768	1.781	474.
200.	1.4724	907.8	4.61	26.77	66.52	4.184	.760	1.774	460.
210.	1.5884	818.6	3.93	41.28	84.17	4.270	.749	1.748	437.
220.	1.7141	764.9	3.38	55.18	101.46	4.350	.743	1.708	419.
230.	1.8468	740.0	2.94	68.41	118.27	4.425	.739	1.656	407.
240.	1.9838	733.3	2.59	80.96	134.53	4.494	.737	1.601	399.
250.	2.1233	741.5	2.31	92.89	150.22	4.558	.733	1.542	395.
260.	2.2633	759.3	2.07	104.22	165.33	4.618	.729	1.482	393.
270.	2.4025	783.0	1.88	114.99	179.86	4.673	.723	1.425	393.
280.	2.5403	811.7	1.71	125.26	193.85	4.723	.715	1.370	394.
290.	2.6763	842.3	1.58	135.07	207.33	4.771	.707	1.319	397.
300.	2.8098	874.3	1.46	144.45	220.32	4.815	.697	1.274	400.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

280. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_p J/G-K	VELOCITY OF SOUND M/S
* 57.509	.7555	9702.6	39.91	-191.98	-170.82	2.121	1.114	1.653	1200.
58.	.7567	9648.0	39.59	-191.20	-170.01	2.135	1.112	1.652	1197.
60.	.7614	9426.9	38.35	-188.03	-166.71	2.191	1.105	1.648	1186.
62.	.7661	9207.1	37.18	-184.87	-163.42	2.245	1.098	1.644	1174.
64.	.7709	8988.8	36.08	-181.72	-160.13	2.297	1.089	1.640	1163.
66.	.7757	8771.8	35.04	-178.58	-156.86	2.347	1.081	1.637	1153.
68.	.7805	8556.4	34.05	-175.44	-153.59	2.396	1.072	1.633	1142.
70.	.7854	8342.4	33.10	-172.31	-150.32	2.443	1.063	1.630	1131.
72.	.7903	8130.0	32.19	-169.20	-147.07	2.489	1.053	1.627	1120.
74.	.7953	7919.4	31.32	-166.08	-143.82	2.534	1.044	1.623	1110.
76.	.8003	7710.6	30.47	-162.98	-140.57	2.577	1.034	1.620	1099.
78.	.8054	7503.8	29.65	-159.89	-137.34	2.619	1.024	1.617	1088.
80.	.8105	7299.2	28.86	-156.80	-134.10	2.660	1.015	1.614	1078.
82.	.8158	7096.8	28.09	-153.72	-130.88	2.700	1.005	1.612	1067.
84.	.8211	6897.0	27.34	-150.65	-127.66	2.739	.995	1.609	1056.
86.	.8265	6699.7	26.61	-147.58	-124.44	2.776	.986	1.606	1045.
88.	.8319	6505.3	25.89	-144.52	-121.23	2.813	.976	1.604	1034.
90.	.8375	6313.8	25.20	-141.47	-118.02	2.849	.967	1.602	1023.
92.	.8431	6125.4	24.51	-138.43	-114.82	2.885	.959	1.600	1011.
94.	.8489	5940.2	23.85	-135.39	-111.62	2.919	.950	1.599	1000.
96.	.8547	5758.5	23.20	-132.35	-108.42	2.953	.942	1.597	988.
98.	.8606	5580.3	22.56	-129.33	-105.23	2.986	.934	1.596	976.
100.	.8667	5405.7	21.93	-126.30	-102.04	3.018	.928	1.596	964.
102.	.8728	5235.0	21.32	-123.28	-98.84	3.049	.921	1.596	952.
104.	.8791	5068.1	20.72	-120.27	-95.65	3.080	.916	1.596	940.
106.	.8855	4905.3	20.13	-117.25	-92.46	3.111	.911	1.598	928.
108.	.8920	4746.4	19.56	-114.24	-89.26	3.141	.907	1.599	915.
110.	.8986	4591.7	18.99	-111.22	-86.06	3.170	.904	1.601	902.
112.	.9053	4441.0	18.44	-108.20	-82.86	3.199	.901	1.604	889.
114.	.9122	4294.5	17.90	-105.18	-79.64	3.227	.900	1.608	876.
116.	.9192	4152.1	17.38	-102.16	-76.42	3.255	.898	1.611	863.
118.	.9263	4013.7	16.86	-99.14	-73.20	3.283	.897	1.615	850.
120.	.9336	3879.2	16.37	-96.11	-69.96	3.310	.895	1.618	837.
122.	.9410	3748.5	15.88	-93.08	-66.73	3.337	.892	1.619	825.
124.	.9486	3621.3	15.41	-90.05	-63.49	3.363	.886	1.618	813.
126.	.9564	3497.5	14.96	-87.03	-60.25	3.389	.875	1.612	803.
128.	.9643	3376.8	14.52	-84.03	-57.03	3.414	.856	1.599	794.
130.	.9725	3259.4	14.10	-81.12	-53.89	3.439	.857	1.617	784.
132.	.9809	3142.7	13.79	-78.11	-50.65	3.464	.854	1.622	773.
134.	.9895	3036.2	13.40	-75.09	-47.38	3.488	.851	1.627	762.
136.	.9982	2921.9	13.03	-72.08	-44.14	3.512	.849	1.636	750.
138.	1.0073	2820.3	12.67	-69.05	-40.84	3.536	.846	1.642	740.
140.	1.0165	2717.1	12.30	-66.02	-37.56	3.560	.842	1.648	729.
142.	1.0260	2617.9	11.94	-62.98	-34.26	3.583	.838	1.651	718.
144.	1.0355	2520.1	11.58	-59.97	-30.98	3.606	.834	1.655	707.
146.	1.0456	2430.3	11.23	-56.93	-27.65	3.629	.829	1.657	697.
148.	1.0559	2341.8	10.89	-53.89	-24.33	3.652	.825	1.660	687.
150.	1.0664	2257.7	10.56	-50.86	-21.00	3.674	.821	1.664	676.
152.	1.0772	2176.2	10.25	-47.83	-17.66	3.696	.817	1.668	666.
154.	1.0884	2095.6	9.94	-44.78	-14.30	3.718	.814	1.674	657.
156.	1.0998	2018.7	9.64	-41.74	-10.95	3.740	.810	1.679	647.
158.	1.1115	1942.7	9.35	-38.71	-7.59	3.761	.807	1.685	637.
160.	1.1235	1868.3	9.06	-35.62	-4.16	3.783	.810	1.698	626.
165.	1.1552	1703.5	8.36	-27.93	4.41	3.836	.825	1.729	597.
170.	1.1891	1553.5	7.73	-20.19	13.11	3.887	.824	1.747	574.
175.	1.2256	1419.1	7.14	-12.44	21.88	3.938	.815	1.758	553.
180.	1.2646	1298.7	6.58	-4.75	30.66	3.988	.802	1.762	534.
185.	1.3065	1195.0	6.06	2.89	39.47	4.036	.790	1.761	516.
190.	1.3513	1104.4	5.59	10.44	48.28	4.083	.778	1.760	500.
195.	1.3991	1027.5	5.16	17.90	57.08	4.129	.768	1.758	485.
200.	1.4496	963.5	4.77	25.26	65.85	4.173	.760	1.751	471.
210.	1.5590	868.4	4.08	39.62	83.27	4.258	.749	1.728	448.
220.	1.6776	808.7	3.52	53.41	100.38	4.338	.743	1.693	429.
230.	1.8029	778.6	3.07	66.58	117.06	4.412	.740	1.646	416.
240.	1.9327	767.4	2.71	79.12	133.24	4.481	.737	1.595	407.
250.	2.0653	771.7	2.41	91.07	148.89	4.545	.734	1.540	402.
260.	2.1989	786.0	2.17	102.44	164.01	4.604	.730	1.484	400.
270.	2.3320	807.1	1.97	113.27	178.57	4.659	.724	1.429	399.
280.	2.4642	833.6	1.80	123.62	192.61	4.710	.717	1.376	400.
290.	2.5948	862.6	1.65	133.50	206.13	4.758	.709	1.326	402.
300.	2.7232	893.3	1.53	142.96	219.21	4.802	.699	1.280	404.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

230. BAR ISOBAR

TEMPERATURE K	VOLUME CM3/G	ISOTHERM DERIVATIVE BAR-CM3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	CV J/G-K	CP J/G-K	VELOCITY OF SOUND M/S
* 57.619	.7552	9737.7	39.92	-191.92	-170.02	2.122	1.115	1.653	1201.
58.	.7561	9695.5	39.67	-191.32	-169.39	2.132	1.114	1.652	1199.
60.	.7608	9475.1	38.43	-188.15	-166.09	2.188	1.106	1.648	1188.
62.	.7655	9256.1	37.26	-185.00	-162.80	2.242	1.099	1.644	1177.
64.	.7702	9038.5	36.16	-181.85	-159.52	2.294	1.090	1.640	1166.
66.	.7750	8822.3	35.12	-178.71	-156.24	2.345	1.082	1.636	1155.
68.	.7798	8607.5	34.13	-175.59	-152.97	2.394	1.073	1.632	1144.
70.	.7846	8394.3	33.16	-172.46	-149.71	2.441	1.064	1.629	1134.
72.	.7895	8182.6	32.27	-169.35	-146.46	2.487	1.054	1.626	1123.
74.	.7945	7972.7	31.39	-166.25	-143.21	2.531	1.045	1.622	1113.
76.	.7995	7764.6	30.55	-163.15	-139.96	2.574	1.035	1.619	1102.
78.	.8045	7558.5	29.73	-160.06	-136.73	2.616	1.026	1.616	1091.
80.	.8096	7354.6	28.94	-156.98	-133.50	2.657	1.016	1.613	1081.
82.	.8148	7152.9	28.17	-153.91	-130.28	2.697	1.006	1.610	1070.
84.	.8201	6953.7	27.42	-150.84	-127.06	2.736	.997	1.607	1059.
86.	.8254	6757.1	26.69	-147.78	-123.85	2.774	.987	1.605	1048.
88.	.8309	6563.3	25.98	-144.73	-120.64	2.811	.978	1.602	1037.
90.	.8364	6372.4	25.28	-141.69	-117.43	2.847	.969	1.600	1026.
92.	.8420	6184.7	24.60	-138.65	-114.24	2.882	.96	1.598	1015.
94.	.8477	6000.1	23.93	-135.62	-111.04	2.916	.951	1.596	1003.
96.	.8534	5819.0	23.28	-132.60	-107.85	2.950	.943	1.595	992.
98.	.8593	5641.3	22.65	-129.58	-104.66	2.983	.936	1.594	980.
100.	.8653	5467.3	22.02	-126.57	-101.47	3.015	.929	1.593	968.
102.	.8714	5297.1	21.41	-123.56	-98.29	3.046	.923	1.593	956.
104.	.8776	5130.7	20.81	-120.55	-95.10	3.077	.917	1.593	944.
106.	.8839	4968.3	20.23	-117.54	-91.91	3.108	.913	1.594	932.
108.	.8903	4810.0	19.65	-114.54	-88.72	3.137	.909	1.596	919.
110.	.8968	4655.6	19.09	-111.54	-85.53	3.167	.906	1.598	906.
112.	.9035	4505.4	18.54	-108.53	-82.33	3.196	.903	1.601	894.
114.	.9103	4359.3	18.00	-105.52	-79.12	3.224	.901	1.604	881.
116.	.9172	4217.2	17.48	-102.51	-75.91	3.252	.900	1.607	868.
118.	.9242	4079.1	16.97	-99.50	-72.70	3.279	.899	1.611	855.
120.	.9314	3944.9	16.47	-96.48	-69.47	3.307	.897	1.613	842.
122.	.9387	3814.5	15.99	-93.46	-66.24	3.333	.894	1.615	830.
124.	.9462	3687.6	15.52	-90.45	-63.01	3.359	.888	1.613	818.
126.	.9538	3564.1	15.07	-87.44	-59.78	3.385	.877	1.607	808.
128.	.9616	3443.6	14.63	-84.46	-56.58	3.410	.858	1.593	800.
130.	.9697	3327.3	14.32	-81.57	-53.45	3.435	.858	1.611	790.
132.	.9778	3210.8	13.90	-78.58	-50.22	3.459	.856	1.615	779.
134.	.9863	3104.4	13.51	-75.57	-46.97	3.484	.853	1.620	768.
136.	.9948	2990.4	13.15	-72.59	-43.74	3.508	.850	1.628	757.
138.	1.0037	2888.8	12.79	-69.57	-40.48	3.532	.847	1.634	747.
140.	1.0127	2785.7	12.43	-66.56	-37.19	3.555	.843	1.640	736.
142.	1.0220	2686.6	12.07	-63.55	-33.91	3.578	.839	1.643	725.
144.	1.0313	2589.3	11.71	-60.56	-30.65	3.601	.835	1.647	715.
146.	1.0412	2499.3	11.36	-57.53	-27.34	3.624	.831	1.648	704.
148.	1.0512	2410.7	11.02	-54.52	-24.03	3.647	.826	1.651	694.
150.	1.0614	2326.7	10.69	-51.51	-20.73	3.669	.822	1.653	684.
152.	1.0720	2245.1	10.38	-48.50	-17.41	3.691	.819	1.657	674.
154.	1.0829	2164.2	10.07	-45.47	-14.07	3.713	.815	1.662	664.
156.	1.0940	2086.4	9.78	-42.46	-10.74	3.734	.812	1.667	655.
158.	1.1053	2010.8	9.49	-39.46	-7.40	3.755	.809	1.673	645.
160.	1.1169	1936.4	9.21	-36.40	-4.01	3.777	.811	1.685	634.
165.	1.1475	1771.0	8.51	-28.78	4.50	3.829	.826	1.715	606.
170.	1.1803	1620.0	7.87	-21.11	13.12	3.881	.825	1.730	583.
175.	1.2153	1484.9	7.29	-13.44	21.80	3.931	.816	1.741	563.
180.	1.2527	1363.3	6.73	-5.84	30.49	3.980	.803	1.742	544.
185.	1.2928	1257.9	6.22	1.72	39.21	4.028	.790	1.741	526.
190.	1.3354	1165.2	5.75	9.18	47.91	4.074	.779	1.739	510.
195.	1.3808	1085.9	5.32	16.56	56.60	4.119	.769	1.736	495.
200.	1.4287	1019.4	4.92	23.83	65.26	4.163	.761	1.730	481.
210.	1.5323	918.8	4.23	38.05	82.48	4.247	.750	1.710	458.
220.	1.6444	853.4	3.66	51.73	99.42	4.326	.744	1.678	439.
230.	1.7631	818.4	3.20	64.84	115.97	4.399	.740	1.635	425.
240.	1.8863	802.9	2.83	77.36	132.06	4.468	.738	1.588	416.
250.	2.0125	803.1	2.52	89.31	147.66	4.532	.735	1.537	410.
260.	2.1400	814.0	2.27	100.72	162.78	4.591	.731	1.485	407.
270.	2.2675	832.3	2.06	111.61	177.36	4.646	.726	1.433	405.
280.	2.3944	856.6	1.88	122.01	191.45	4.697	.719	1.381	406.
290.	2.5199	883.9	1.73	131.96	205.04	4.745	.711	1.332	407.
300.	2.6435	913.4	1.60	141.49	218.16	4.789	.701	1.287	409.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

300. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 57.729	.7549	9772.8	39.93	-191.86	-169.22	2.122	1.116	1.652	1203.
58.	.7555	9742.9	39.75	-191.43	-168.77	2.130	1.115	1.652	1201.
60.	.7602	9523.2	38.51	-188.28	-165.47	2.186	1.107	1.647	1190.
62.	.7649	9304.9	37.34	-185.13	-162.18	2.240	1.100	1.643	1179.
64.	.7696	9088.1	36.24	-181.98	-158.90	2.292	1.091	1.639	1168.
66.	.7743	8872.6	35.20	-178.85	-155.62	2.342	1.083	1.635	1158.
68.	.7791	8658.5	34.21	-175.73	-152.36	2.391	1.074	1.632	1147.
70.	.7839	8446.0	33.26	-172.61	-149.10	2.438	1.065	1.628	1136.
72.	.7888	8235.0	32.35	-169.51	-145.84	2.484	1.055	1.625	1126.
74.	.7937	8025.8	31.47	-166.41	-142.60	2.529	1.046	1.621	1115.
76.	.7986	7818.4	30.63	-163.32	-139.36	2.572	1.036	1.618	1105.
78.	.8037	7613.0	29.81	-160.23	-136.12	2.614	1.027	1.615	1094.
80.	.8088	7409.7	29.02	-157.16	-132.90	2.655	1.017	1.612	1084.
82.	.8139	7208.7	28.25	-154.09	-129.68	2.695	1.007	1.609	1073.
84.	.8191	7010.1	27.50	-151.03	-126.46	2.733	.998	1.606	1062.
86.	.8244	6814.2	26.77	-147.98	-123.25	2.771	.988	1.603	1051.
88.	.8298	6621.0	26.06	-144.94	-120.05	2.808	.979	1.600	1040.
90.	.8353	6430.8	25.36	-141.91	-116.85	2.844	.971	1.598	1029.
92.	.8408	6243.6	24.68	-138.88	-113.65	2.879	.961	1.596	1018.
94.	.8465	6059.6	24.02	-135.86	-110.46	2.913	.953	1.594	1007.
96.	.8522	5879.0	23.37	-132.84	-107.26	2.947	.945	1.593	995.
98.	.8580	5702.0	22.73	-129.83	-104.09	2.980	.937	1.591	984.
100.	.8639	5528.5	22.11	-126.83	-100.91	3.012	.931	1.591	972.
102.	.8700	5358.8	21.50	-123.83	-97.73	3.043	.924	1.590	960.
104.	.8761	5192.9	20.90	-120.83	-94.55	3.074	.918	1.591	948.
106.	.8823	5031.0	20.32	-117.83	-91.38	3.104	.914	1.591	936.
108.	.8887	4873.0	19.75	-114.84	-88.18	3.134	.910	1.593	923.
110.	.8951	4719.1	19.19	-111.85	-84.99	3.163	.907	1.595	911.
112.	.9017	4569.3	18.64	-108.85	-81.80	3.192	.905	1.597	898.
114.	.9084	4423.5	18.10	-105.85	-78.60	3.221	.903	1.600	885.
116.	.9152	4281.8	17.58	-102.86	-75.40	3.248	.902	1.604	872.
118.	.9221	4144.0	17.07	-99.85	-72.19	3.276	.901	1.607	860.
120.	.9292	4010.2	16.58	-96.85	-68.97	3.303	.899	1.609	847.
122.	.9364	3880.0	16.10	-93.84	-65.75	3.330	.896	1.610	835.
124.	.9438	3753.4	15.63	-90.84	-62.53	3.356	.893	1.609	824.
126.	.9513	3630.1	15.18	-87.85	-59.31	3.381	.889	1.602	814.
128.	.9589	3509.9	14.74	-84.88	-56.11	3.407	.883	1.588	805.
130.	.9669	3394.6	14.43	-82.00	-53.06	3.431	.860	1.606	796.
132.	.9749	3278.3	14.02	-79.03	-49.79	3.455	.857	1.609	785.
134.	.9832	3171.9	13.63	-76.04	-46.54	3.480	.854	1.613	774.
136.	.9916	3058.4	13.26	-73.08	-43.33	3.503	.851	1.620	763.
138.	1.0003	2956.7	12.90	-70.08	-40.07	3.527	.848	1.626	753.
140.	1.0091	2853.7	12.55	-67.09	-36.82	3.551	.845	1.632	743.
142.	1.0182	2754.8	12.19	-64.09	-33.55	3.574	.841	1.635	732.
144.	1.0273	2657.8	11.84	-61.12	-30.30	3.597	.838	1.638	721.
146.	1.0369	2567.7	11.49	-58.12	-27.01	3.619	.832	1.639	711.
148.	1.0467	2479.0	11.15	-55.12	-23.72	3.642	.828	1.641	701.
150.	1.0567	2394.9	10.82	-52.13	-20.43	3.664	.824	1.643	691.
152.	1.0670	2313.3	10.51	-49.14	-17.13	3.686	.820	1.646	682.
154.	1.0776	2232.1	10.20	-46.15	-13.82	3.707	.816	1.650	672.
156.	1.0884	2153.4	9.91	-43.16	-10.51	3.729	.813	1.656	662.
158.	1.0994	2078.3	9.62	-40.18	-7.20	3.750	.810	1.661	653.
160.	1.1106	2003.9	9.35	-37.14	-3.83	3.771	.812	1.673	642.
165.	1.1403	1837.8	8.66	-29.59	4.62	3.823	.827	1.702	615.
170.	1.1719	1685.9	8.02	-21.99	13.17	3.874	.826	1.716	592.
175.	1.2057	1550.0	7.44	-14.40	21.77	3.924	.816	1.724	572.
180.	1.2415	1427.4	6.89	-6.87	30.37	3.972	.804	1.726	553.
185.	1.2799	1320.5	6.37	.60	39.01	4.020	.791	1.722	536.
190.	1.3207	1225.9	5.90	7.99	47.61	4.065	.779	1.719	520.
195.	1.3639	1144.3	5.46	15.28	56.20	4.110	.769	1.716	505.
200.	1.4095	1075.3	5.07	22.48	64.76	4.153	.761	1.711	492.
210.	1.5078	969.6	4.37	36.56	81.79	4.237	.750	1.692	468.
220.	1.6141	899.0	3.80	50.14	98.56	4.315	.744	1.664	448.
230.	1.7260	859.2	3.33	63.19	114.99	4.388	.741	1.624	434.
240.	1.8439	839.5	2.94	75.68	130.99	4.456	.738	1.580	424.
250.	1.9643	835.8	2.63	87.63	146.56	4.519	.736	1.533	417.
260.	2.0861	843.1	2.37	99.06	161.65	4.578	.732	1.485	414.
270.	2.2062	858.7	2.15	109.99	176.24	4.634	.727	1.436	412.
280.	2.3302	880.7	1.96	120.45	190.38	4.685	.720	1.389	412.
290.	2.4509	906.2	1.80	130.47	203.99	4.733	.712	1.338	413.
300.	2.5700	934.4	1.67	140.06	217.16	4.777	.703	1.293	414.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

350. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 58.276	.7532	9947.4	39.97	-191.58	-165.21	2.126	1.119	1.650	1211.
60.	.7572	9761.2	38.90	-188.87	-162.37	2.174	1.113	1.646	1202.
62.	.7618	9546.5	37.73	-185.74	-159.08	2.228	1.105	1.641	1191.
64.	.7664	9333.2	36.63	-182.63	-155.80	2.280	1.097	1.637	1180.
66.	.7710	9121.2	35.59	-179.52	-152.53	2.331	1.088	1.633	1170.
68.	.7756	8910.6	34.59	-176.42	-149.27	2.379	1.079	1.629	1160.
70.	.7803	8701.4	33.64	-173.33	-146.02	2.427	1.070	1.624	1149.
72.	.7851	8493.8	32.73	-170.25	-142.78	2.472	1.061	1.620	1139.
74.	.7898	8287.9	31.86	-167.18	-139.54	2.517	1.051	1.617	1129.
76.	.7946	8083.8	31.01	-164.12	-136.31	2.560	1.042	1.613	1119.
78.	.7995	7881.7	30.20	-161.07	-133.09	2.602	1.032	1.609	1108.
80.	.8044	7661.6	29.41	-158.03	-129.87	2.642	1.023	1.605	1098.
82.	.8094	7483.7	28.64	-154.99	-126.66	2.682	1.013	1.602	1088.
84.	.8145	7288.3	27.89	-151.97	-123.46	2.720	1.004	1.598	1077.
86.	.8196	7095.4	27.17	-148.95	-120.27	2.758	.994	1.595	1067.
88.	.8248	6905.2	26.46	-145.95	-117.08	2.795	.985	1.592	1056.
90.	.8300	6717.8	25.77	-142.95	-113.90	2.830	.976	1.589	1046.
92.	.8353	6533.5	25.09	-139.96	-110.72	2.865	.968	1.587	1035.
94.	.8407	6352.3	24.43	-136.98	-107.55	2.899	.960	1.584	1024.
96.	.8462	6174.3	23.79	-134.00	-104.38	2.933	.952	1.582	1013.
98.	.8518	5999.6	23.16	-131.03	-101.22	2.965	.945	1.580	1002.
100.	.8574	5828.8	22.54	-128.07	-98.06	2.997	.938	1.579	991.
102.	.8631	5661.5	21.94	-125.11	-94.90	3.028	.932	1.578	979.
104.	.8690	5497.8	21.35	-122.15	-91.75	3.059	.927	1.578	967.
106.	.8749	5338.0	20.77	-119.21	-88.59	3.089	.922	1.578	956.
108.	.8809	5182.1	20.21	-116.27	-85.44	3.119	.919	1.579	944.
110.	.8870	5030.1	19.65	-113.32	-82.28	3.148	.916	1.580	932.
112.	.8932	4882.0	19.11	-110.38	-79.12	3.176	.914	1.582	919.
114.	.8995	4737.8	18.58	-107.43	-75.95	3.204	.912	1.584	907.
116.	.9059	4597.6	18.07	-104.48	-72.78	3.232	.911	1.587	895.
118.	.9124	4461.2	17.56	-101.53	-69.60	3.259	.910	1.589	883.
120.	.9190	4328.7	17.08	-98.58	-66.42	3.286	.909	1.591	871.
122.	.9257	4199.7	16.60	-95.63	-63.24	3.312	.905	1.591	859.
124.	.9325	4074.3	16.14	-92.69	-60.05	3.338	.899	1.588	848.
126.	.9395	3952.1	15.69	-89.76	-56.88	3.363	.888	1.581	839.
128.	.9465	3833.1	15.26	-86.85	-53.73	3.388	.869	1.565	831.
130.	.9539	3722.9	14.97	-84.06	-50.67	3.412	.868	1.581	823.
132.	.9613	3607.5	14.57	-81.16	-47.51	3.436	.865	1.583	813.
134.	.9690	3500.8	14.18	-78.24	-44.32	3.460	.861	1.583	802.
136.	.9765	3390.7	13.81	-75.35	-41.17	3.483	.858	1.587	792.
138.	.9845	3287.7	13.46	-72.43	-37.98	3.506	.854	1.591	783.
140.	.9925	3185.5	13.12	-69.53	-34.80	3.529	.851	1.596	773.
142.	1.0007	3087.3	12.79	-66.62	-31.59	3.552	.847	1.600	764.
144.	1.0089	2992.7	12.46	-63.74	-28.42	3.574	.843	1.603	754.
146.	1.0176	2901.1	12.11	-60.81	-25.20	3.596	.839	1.604	745.
148.	1.0264	2811.7	11.77	-57.91	-21.99	3.618	.835	1.603	735.
150.	1.0353	2727.4	11.45	-55.01	-18.77	3.640	.831	1.603	726.
152.	1.0445	2645.0	11.13	-52.11	-15.56	3.661	.827	1.604	716.
154.	1.0539	2562.4	10.83	-49.22	-12.33	3.682	.823	1.605	707.
156.	1.0633	2479.4	10.53	-46.34	-9.12	3.703	.819	1.609	698.
158.	1.0730	2406.2	10.25	-43.46	-5.90	3.723	.816	1.611	689.
160.	1.0828	2333.2	9.98	-40.54	-2.64	3.744	.818	1.620	680.
165.	1.1086	2163.0	9.33	-33.26	5.54	3.794	.832	1.649	655.
170.	1.1358	2006.4	8.70	-25.95	13.81	3.844	.831	1.658	633.
175.	1.1645	1867.6	8.11	-18.66	22.09	3.892	.821	1.657	614.
180.	1.1946	1741.5	7.58	-11.46	30.35	3.938	.809	1.656	597.
185.	1.2265	1628.1	7.07	-4.30	38.63	3.984	.796	1.650	581.
190.	1.2600	1525.6	6.60	2.76	46.86	4.028	.783	1.644	566.
195.	1.2951	1434.6	6.16	9.73	55.06	4.070	.773	1.637	551.
200.	1.3319	1355.6	5.75	16.61	63.23	4.112	.765	1.631	538.
210.	1.4105	1228.2	5.04	30.12	79.49	4.191	.753	1.619	514.
220.	1.4948	1136.1	4.44	43.23	95.55	4.266	.747	1.600	493.
230.	1.5845	1073.9	3.93	55.96	111.42	4.336	.743	1.574	477.
240.	1.6780	1035.7	3.51	68.26	126.99	4.402	.741	1.543	464.
250.	1.7748	1013.6	3.15	80.15	142.26	4.465	.739	1.509	455.
260.	1.8735	1003.6	2.85	91.60	157.17	4.523	.736	1.474	448.
270.	1.9735	1005.6	2.60	102.63	171.71	4.578	.732	1.436	444.
280.	2.0743	1015.1	2.38	113.27	185.87	4.630	.726	1.396	442.
290.	2.1749	1031.3	2.19	123.51	199.64	4.678	.719	1.356	441.
300.	2.2749	1052.4	2.02	133.37	212.99	4.723	.711	1.315	441.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

400. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 58.819	.7517	10120.9	40.01	-191.28	-161.21	2.130	1.123	1.648	1219.
60.	.7543	9995.5	39.29	-189.44	-159.27	2.163	1.119	1.645	1213.
62.	.7588	9784.2	38.11	-186.34	-155.98	2.217	1.110	1.640	1202.
64.	.7633	9574.2	37.01	-183.24	-152.71	2.269	1.102	1.635	1192.
66.	.7678	9365.5	35.96	-180.16	-149.44	2.319	1.093	1.630	1182.
68.	.7723	9158.1	34.97	-177.08	-146.19	2.368	1.084	1.626	1172.
70.	.7769	8952.2	34.02	-174.02	-142.94	2.415	1.075	1.621	1162.
72.	.7815	8747.7	33.11	-170.96	-139.70	2.461	1.066	1.617	1152.
74.	.7861	8544.9	32.23	-167.92	-136.47	2.505	1.056	1.612	1142.
76.	.7908	8343.9	31.39	-164.88	-133.25	2.548	1.047	1.608	1132.
78.	.7956	8144.8	30.57	-161.86	-130.04	2.589	1.038	1.604	1122.
80.	.8003	7947.6	29.78	-158.85	-126.83	2.630	1.028	1.600	1112.
82.	.8052	7752.7	29.01	-155.84	-123.64	2.669	1.019	1.596	1102.
84.	.8100	7560.1	28.27	-152.85	-120.45	2.708	1.009	1.592	1092.
86.	.8150	7370.0	27.55	-149.87	-117.27	2.745	1.000	1.588	1082.
88.	.8200	7182.5	26.84	-146.89	-114.09	2.782	.991	1.585	1072.
90.	.8250	6997.8	26.15	-143.93	-110.93	2.817	.983	1.581	1061.
92.	.8301	6816.0	25.48	-140.97	-107.77	2.852	.974	1.578	1051.
94.	.8353	6637.2	24.83	-138.03	-104.61	2.886	.966	1.575	1040.
96.	.8406	6461.7	24.19	-135.09	-101.46	2.919	.959	1.573	1030.
98.	.8459	6289.4	23.56	-132.16	-98.32	2.952	.952	1.571	1019.
100.	.8513	6120.6	22.95	-129.23	-95.18	2.983	.945	1.569	1008.
102.	.8568	5955.3	22.35	-126.31	-92.04	3.014	.939	1.568	997.
104.	.8623	5793.6	21.77	-123.40	-88.91	3.045	.934	1.567	986.
106.	.8680	5635.7	21.19	-120.49	-85.78	3.075	.930	1.567	974.
108.	.8737	5481.4	20.63	-117.59	-82.64	3.104	.927	1.567	963.
110.	.8794	5330.0	20.09	-114.68	-79.51	3.133	.924	1.568	951.
112.	.8853	5184.4	19.55	-111.78	-76.37	3.161	.922	1.569	939.
114.	.8913	5041.6	19.03	-108.88	-73.23	3.189	.921	1.571	928.
116.	.8973	4902.7	18.52	-105.98	-70.09	3.216	.920	1.573	916.
118.	.9034	4767.4	18.02	-103.07	-66.94	3.243	.919	1.575	904.
120.	.9096	4635.9	17.54	-100.17	-63.78	3.270	.917	1.576	892.
122.	.9160	4507.9	17.06	-97.27	-60.63	3.296	.914	1.576	881.
124.	.9224	4383.4	16.61	-94.37	-57.48	3.321	.909	1.572	871.
126.	.9288	4262.1	16.16	-91.49	-54.34	3.346	.897	1.564	862.
128.	.9354	4143.9	15.73	-88.64	-51.22	3.371	.876	1.547	854.
130.	.9423	4029.0	15.45	-85.92	-48.22	3.394	.877	1.560	848.
132.	.9492	3924.7	15.06	-83.07	-45.11	3.418	.873	1.560	838.
134.	.9563	3817.0	14.68	-80.21	-41.96	3.441	.868	1.560	828.
136.	.9633	3711.6	14.32	-77.39	-38.86	3.464	.864	1.561	819.
138.	.9706	3606.8	13.97	-74.54	-35.71	3.487	.860	1.563	810.
140.	.9780	3505.6	13.64	-71.71	-32.59	3.510	.856	1.566	801.
142.	.9855	3408.1	13.31	-68.87	-29.44	3.532	.852	1.570	792.
144.	.9931	3316.2	13.00	-66.05	-26.33	3.554	.849	1.572	784.
146.	1.0010	3222.5	12.68	-63.20	-23.16	3.576	.845	1.575	775.
148.	1.0089	3132.0	12.36	-60.37	-20.01	3.597	.841	1.576	766.
150.	1.0171	3047.2	12.03	-57.54	-16.85	3.618	.837	1.574	757.
152.	1.0254	2963.6	11.71	-54.71	-13.70	3.639	.833	1.572	748.
154.	1.0338	2879.5	11.41	-51.89	-10.54	3.660	.829	1.573	739.
156.	1.0423	2794.5	11.12	-49.10	-7.41	3.680	.825	1.574	730.
158.	1.0510	2721.3	10.83	-46.30	-4.25	3.700	.822	1.574	722.
160.	1.0598	2651.1	10.56	-43.46	-1.07	3.720	.824	1.580	713.
165.	1.0827	2476.4	9.91	-36.40	6.91	3.770	.838	1.606	689.
170.	1.1067	2315.4	9.31	-29.31	14.95	3.818	.836	1.616	669.
175.	1.1318	2173.8	8.73	-22.25	23.02	3.864	.826	1.613	651.
180.	1.1580	2045.7	8.19	-15.27	31.05	3.910	.813	1.604	635.
185.	1.1855	1927.1	7.69	-8.35	39.07	3.953	.800	1.598	620.
190.	1.2141	1819.3	7.22	-1.53	47.03	3.996	.788	1.591	606.
195.	1.2439	1720.9	6.78	5.20	54.96	4.037	.777	1.583	592.
200.	1.2749	1634.3	6.37	11.84	62.84	4.077	.769	1.575	579.
210.	1.3408	1490.2	5.64	24.91	78.54	4.154	.757	1.563	555.
220.	1.4108	1382.5	5.02	37.65	94.08	4.226	.750	1.548	534.
230.	1.4850	1300.2	4.49	50.08	109.48	4.294	.746	1.531	517.
240.	1.5626	1245.2	4.03	62.17	124.68	4.359	.744	1.508	502.
250.	1.6431	1208.1	3.64	73.93	139.65	4.420	.742	1.482	491.
260.	1.7252	1182.8	3.31	85.31	154.31	4.478	.739	1.455	483.
270.	1.8090	1171.8	3.02	96.35	168.71	4.532	.735	1.425	477.
280.	1.8939	1166.7	2.78	107.04	182.80	4.583	.730	1.394	472.
290.	1.9793	1175.3	2.57	117.40	196.57	4.632	.724	1.360	470.
300.	2.0648	1188.5	2.38	127.41	210.00	4.677	.717	1.325	469.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

450. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 59.358	.7561	10293.3	40.06	-190.98	-157.23	2.134	1.126	1.640	1227.
60.	.7515	10226.2	39.67	-189.99	-156.17	2.152	1.123	1.644	1224.
62.	.7559	10018.1	38.49	-186.90	-152.89	2.206	1.115	1.639	1213.
64.	.7603	9811.3	37.38	-183.83	-149.61	2.258	1.107	1.634	1203.
66.	.7647	9605.7	36.34	-180.76	-146.35	2.308	1.098	1.628	1194.
68.	.7691	9401.4	35.34	-177.71	-143.10	2.357	1.089	1.623	1184.
70.	.7736	9198.5	34.39	-174.67	-139.86	2.404	1.081	1.618	1174.
72.	.7781	8997.0	33.47	-171.64	-136.62	2.449	1.071	1.614	1164.
74.	.7826	8797.2	32.60	-168.62	-133.40	2.493	1.062	1.609	1155.
76.	.7871	8599.0	31.75	-165.61	-130.19	2.536	1.052	1.604	1145.
78.	.7917	8402.7	30.94	-162.61	-126.98	2.578	1.043	1.600	1135.
80.	.7964	8208.3	30.15	-159.63	-123.79	2.618	1.034	1.595	1126.
82.	.8011	8016.1	29.38	-156.65	-120.60	2.658	1.024	1.591	1116.
84.	.8058	7826.1	28.64	-153.68	-117.42	2.696	1.015	1.587	1106.
86.	.8106	7638.5	27.91	-150.73	-114.25	2.733	1.006	1.582	1096.
88.	.8154	7453.5	27.21	-147.78	-111.09	2.769	.997	1.579	1086.
90.	.8203	7271.2	26.52	-144.85	-107.94	2.805	.989	1.575	1076.
92.	.8252	7091.7	25.86	-141.93	-104.79	2.839	.981	1.571	1066.
94.	.8302	6915.2	25.20	-139.01	-101.65	2.873	.973	1.568	1056.
96.	.8353	6741.8	24.57	-136.11	-98.52	2.906	.965	1.565	1045.
98.	.8404	6571.6	23.95	-133.21	-95.39	2.938	.959	1.562	1035.
100.	.8456	6404.7	23.34	-130.32	-92.27	2.970	.951	1.560	1024.
102.	.8508	6241.2	22.74	-127.43	-89.15	3.001	.947	1.559	1014.
104.	.8561	6081.3	22.16	-124.56	-86.03	3.031	.942	1.557	1003.
106.	.8615	5924.9	21.59	-121.69	-82.92	3.061	.938	1.557	992.
108.	.8669	5772.2	21.04	-118.82	-79.81	3.090	.934	1.557	981.
110.	.8724	5623.2	20.49	-115.95	-76.69	3.118	.932	1.557	969.
112.	.8780	5477.8	19.96	-113.09	-73.58	3.147	.930	1.558	958.
114.	.8837	5336.2	19.44	-110.22	-70.46	3.174	.929	1.560	946.
116.	.8894	5198.3	18.94	-107.36	-67.34	3.201	.928	1.562	935.
118.	.8952	5064.0	18.44	-104.49	-64.21	3.228	.928	1.563	924.
120.	.9011	4933.3	17.96	-101.63	-61.08	3.254	.926	1.564	913.
122.	.9070	4806.1	17.49	-98.77	-57.95	3.280	.924	1.563	902.
124.	.9131	4682.3	17.04	-95.92	-54.83	3.306	.918	1.559	892.
126.	.9192	4561.7	16.60	-93.08	-51.72	3.330	.907	1.549	883.
128.	.9254	4444.2	16.17	-90.27	-48.63	3.355	.887	1.532	876.
130.	.9319	4344.4	15.91	-87.61	-45.67	3.378	.885	1.543	870.
132.	.9383	4231.5	15.51	-84.81	-42.59	3.401	.880	1.541	861.
134.	.9449	4122.4	15.14	-82.00	-39.48	3.425	.875	1.540	852.
136.	.9514	4022.9	14.79	-79.23	-36.42	3.447	.870	1.540	844.
138.	.9583	3915.6	14.45	-76.44	-33.32	3.470	.866	1.541	835.
140.	.9651	3816.0	14.12	-73.66	-30.24	3.492	.861	1.542	827.
142.	.9721	3719.1	13.80	-70.88	-27.14	3.514	.857	1.544	818.
144.	.9790	3630.2	13.49	-68.13	-24.07	3.535	.854	1.546	811.
146.	.9863	3533.8	13.19	-65.34	-20.96	3.557	.850	1.549	802.
148.	.9937	3441.9	12.88	-62.57	-17.85	3.578	.847	1.551	794.
150.	1.0012	3356.4	12.57	-59.80	-14.75	3.599	.843	1.551	786.
152.	1.0088	3271.5	12.27	-57.03	-11.64	3.619	.839	1.550	778.
154.	1.0165	3185.7	11.96	-54.28	-8.53	3.640	.835	1.549	769.
156.	1.0242	3102.7	11.66	-51.55	-5.46	3.660	.831	1.548	760.
158.	1.0321	3026.9	11.38	-48.81	-2.37	3.679	.827	1.547	752.
160.	1.0401	2959.9	11.11	-46.03	.77	3.699	.829	1.550	744.
165.	1.0609	2780.9	10.46	-39.14	8.59	3.747	.843	1.573	720.
170.	1.0824	2616.9	9.86	-32.24	16.47	3.794	.841	1.581	701.
175.	1.1049	2471.4	9.29	-25.36	24.36	3.840	.832	1.578	685.
180.	1.1282	2341.1	8.75	-18.55	32.22	3.884	.818	1.568	670.
185.	1.1525	2218.1	8.25	-11.81	40.05	3.927	.805	1.558	655.
190.	1.1777	2106.9	7.78	-5.18	47.82	3.969	.793	1.549	642.
195.	1.2037	2002.6	7.34	1.37	55.53	4.009	.782	1.542	628.
200.	1.2306	1910.4	6.93	7.84	63.21	4.048	.773	1.534	616.
210.	1.2874	1752.4	6.19	20.56	78.49	4.122	.760	1.521	592.
220.	1.3476	1632.3	5.55	32.99	93.63	4.193	.753	1.508	572.
230.	1.4108	1532.5	5.00	45.15	108.64	4.259	.750	1.496	553.
240.	1.4772	1461.5	4.52	57.05	123.52	4.323	.747	1.479	538.
250.	1.5459	1411.6	4.10	68.66	138.23	4.383	.745	1.457	525.
260.	1.6159	1374.3	3.75	79.94	152.66	4.439	.742	1.436	516.
270.	1.6877	1351.2	3.44	90.94	166.89	4.493	.739	1.410	508.
280.	1.7605	1336.6	3.17	101.63	180.85	4.544	.734	1.385	502.
290.	1.8343	1333.8	2.93	112.02	194.56	4.592	.728	1.356	498.
300.	1.9085	1338.3	2.72	122.11	207.99	4.637	.721	1.327	496.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

500. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 59.894	.7485	10464.5	40.11	-190.67	-153.24	2.138	1.129	1.644	1235.
60.	.7488	10453.6	40.04	-190.51	-153.07	2.141	1.128	1.644	1234.
62.	.7531	10248.6	38.86	-187.44	-149.79	2.195	1.120	1.638	1224.
64.	.7574	10044.7	37.75	-184.39	-146.52	2.247	1.112	1.632	1215.
66.	.7617	9842.1	36.70	-181.34	-143.26	2.297	1.103	1.627	1205.
68.	.7660	9640.8	35.70	-178.31	-140.01	2.346	1.094	1.621	1195.
70.	.7704	9440.7	34.75	-175.29	-136.77	2.393	1.085	1.616	1186.
72.	.7748	9242.1	33.83	-172.28	-133.54	2.438	1.076	1.611	1176.
74.	.7792	9044.9	32.95	-169.29	-130.33	2.482	1.067	1.606	1167.
76.	.7836	8849.5	32.11	-166.30	-127.12	2.525	1.057	1.601	1158.
78.	.7881	8655.8	31.29	-163.33	-123.92	2.566	1.048	1.596	1148.
80.	.7926	8464.0	30.50	-160.36	-120.73	2.607	1.039	1.591	1139.
82.	.7971	8274.3	29.73	-157.41	-117.56	2.646	1.030	1.586	1129.
84.	.8017	8086.7	28.99	-154.47	-114.39	2.684	1.021	1.582	1120.
86.	.8064	7901.5	28.27	-151.55	-111.23	2.721	1.012	1.577	1110.
88.	.8110	7718.8	27.57	-148.63	-108.08	2.758	1.003	1.573	1100.
90.	.8158	7538.7	26.88	-145.72	-104.93	2.793	.995	1.569	1090.
92.	.8205	7361.3	26.22	-142.83	-101.80	2.827	.987	1.565	1081.
94.	.8253	7186.8	25.57	-139.94	-98.67	2.861	.979	1.561	1071.
96.	.8302	7015.4	24.93	-137.06	-95.55	2.894	.972	1.558	1061.
98.	.8351	6847.0	24.31	-134.20	-92.44	2.926	.965	1.555	1050.
100.	.8401	6681.9	23.71	-131.34	-89.33	2.957	.959	1.553	1040.
102.	.8452	6520.1	23.11	-128.49	-86.23	2.988	.954	1.551	1030.
104.	.8503	6361.7	22.54	-125.64	-83.13	3.018	.949	1.549	1019.
106.	.8554	6206.7	21.97	-122.80	-80.03	3.048	.945	1.548	1008.
108.	.8606	6055.3	21.42	-119.96	-76.93	3.077	.942	1.548	998.
110.	.8659	5907.5	20.88	-117.13	-73.84	3.105	.940	1.548	987.
112.	.8712	5763.2	20.35	-114.30	-70.74	3.133	.938	1.549	975.
114.	.8766	5622.6	19.84	-111.47	-67.64	3.160	.937	1.550	964.
116.	.8821	5485.6	19.33	-108.64	-64.54	3.187	.937	1.552	953.
118.	.8876	5352.1	18.84	-105.81	-61.43	3.214	.936	1.553	942.
120.	.6932	5222.1	18.36	-102.98	-58.33	3.240	.935	1.553	931.
122.	.8988	5095.5	17.90	-100.16	-55.22	3.266	.932	1.552	921.
124.	.9045	4972.3	17.44	-97.34	-52.12	3.291	.927	1.547	911.
126.	.9103	4852.2	17.00	-94.54	-49.03	3.316	.916	1.539	903.
128.	.9161	4735.2	16.57	-91.77	-45.96	3.340	.896	1.520	896.
130.	.9223	4640.4	16.41	-89.16	-43.05	3.362	.894	1.536	893.
132.	.9283	4529.2	15.96	-86.40	-39.99	3.385	.888	1.528	883.
134.	.9346	4418.3	15.56	-83.64	-36.91	3.409	.882	1.523	874.
136.	.9407	4325.9	15.22	-80.91	-33.88	3.431	.876	1.520	866.
138.	.9471	4215.7	14.89	-78.17	-30.81	3.453	.871	1.522	858.
140.	.9535	4118.0	14.57	-75.44	-27.77	3.475	.866	1.522	851.
142.	.9600	4021.7	14.25	-72.71	-24.71	3.497	.862	1.523	843.
144.	.9665	3936.1	13.95	-70.01	-21.66	3.518	.859	1.524	836.
146.	.9733	3836.5	13.66	-67.28	-18.61	3.539	.854	1.527	828.
148.	.9801	3743.0	13.37	-64.56	-15.55	3.560	.851	1.530	820.
150.	.9871	3656.5	13.07	-61.84	-12.49	3.581	.848	1.530	813.
152.	.9941	3570.2	12.77	-59.13	-9.42	3.601	.844	1.530	805.
154.	1.0012	3482.7	12.46	-56.42	-6.36	3.621	.840	1.530	796.
156.	1.0083	3406.4	12.18	-53.75	-3.33	3.641	.836	1.528	789.
158.	1.0156	3325.9	11.90	-51.06	-.28	3.660	.832	1.526	781.
160.	1.0230	3261.2	11.61	-48.33	2.82	3.680	.834	1.527	773.
165.	1.0420	3078.7	10.97	-41.59	10.51	3.727	.647	1.548	750.
170.	1.0616	2914.1	10.38	-34.83	18.25	3.773	.846	1.553	732.
175.	1.0820	2762.7	9.81	-28.09	26.01	3.818	.836	1.549	715.
180.	1.1031	2629.0	9.27	-21.42	33.73	3.862	.624	1.539	701.
185.	1.1250	2501.8	8.76	-14.83	41.42	3.904	.810	1.528	687.
190.	1.1476	2388.8	8.29	-8.34	49.04	3.944	.797	1.517	674.
195.	1.1707	2279.6	7.86	-1.95	56.59	3.984	.787	1.511	662.
200.	1.1946	2183.7	7.44	4.38	64.11	4.022	.778	1.502	649.
210.	1.2448	2013.2	6.68	16.82	79.06	4.095	.764	1.487	626.
220.	1.2977	1881.3	6.04	29.00	93.89	4.164	.757	1.475	605.
230.	1.3529	1767.9	5.47	40.93	108.57	4.229	.753	1.467	587.
240.	1.4107	1682.0	4.97	52.64	123.18	4.291	.751	1.454	571.
250.	1.4707	1619.5	4.54	64.12	137.66	4.350	.749	1.436	557.
260.	1.5318	1573.7	4.16	75.30	151.89	4.406	.746	1.417	547.
270.	1.5945	1539.2	3.83	86.23	165.96	4.459	.742	1.396	538.
280.	1.6579	1515.1	3.54	96.88	179.78	4.509	.738	1.374	531.
290.	1.7227	1502.8	3.28	107.28	193.41	4.557	.732	1.349	526.
300.	1.7880	1498.1	3.05	117.40	206.86	4.603	.726	1.323	523.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

550. BAR ISOBAR

TEMPERATURE K	VOLUME CM3/G	ISOTHERM DERIVATIVE BAR-CM3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	Cv J/G-K	Cp J/G-K	VELOCITY OF SOUND M/S
* 60.425	.7470	10634.6	40.15	-190.36	-149.27	2.142	1.131	1.643	1243.
62.	.7503	10475.7	39.23	-187.96	-146.69	2.184	1.125	1.638	1235.
64.	.7536	10274.7	38.11	-184.92	-143.42	2.236	1.116	1.632	1225.
66.	.7568	10075.3	37.06	-181.90	-140.16	2.286	1.108	1.626	1216.
68.	.7630	9876.4	36.06	-178.88	-136.92	2.335	1.099	1.620	1207.
70.	.7673	9679.0	35.10	-175.85	-133.68	2.382	1.090	1.614	1197.
72.	.7716	9483.1	34.18	-172.90	-130.46	2.427	1.081	1.609	1188.
74.	.7759	9288.5	33.30	-169.92	-127.25	2.471	1.071	1.603	1179.
76.	.7802	9095.6	32.45	-166.96	-124.05	2.514	1.062	1.598	1170.
78.	.7846	8904.4	31.64	-164.01	-120.85	2.555	1.053	1.593	1160.
80.	.7890	8715.0	30.84	-161.07	-117.67	2.596	1.044	1.588	1151.
82.	.7934	8527.6	30.08	-158.14	-114.50	2.635	1.035	1.583	1142.
84.	.7978	8342.4	29.33	-155.22	-111.34	2.673	1.026	1.578	1133.
86.	.8023	8159.4	28.61	-152.32	-108.19	2.710	1.017	1.573	1123.
88.	.8069	7978.6	27.91	-149.43	-105.05	2.746	1.009	1.568	1114.
90.	.8114	7800.7	27.23	-146.55	-101.92	2.781	1.001	1.564	1104.
92.	.8161	7625.3	26.56	-143.68	-98.79	2.815	.993	1.560	1095.
94.	.8207	7452.7	25.91	-140.82	-95.68	2.849	.985	1.556	1085.
96.	.8254	7283.0	25.28	-137.97	-92.57	2.882	.978	1.552	1075.
98.	.8302	7116.3	24.66	-135.13	-89.47	2.914	.971	1.549	1065.
100.	.8350	6952.8	24.06	-132.30	-86.37	2.945	.966	1.546	1055.
102.	.8398	6792.4	23.47	-129.47	-83.28	2.976	.961	1.544	1045.
104.	.8447	6635.4	22.89	-126.66	-80.19	3.006	.956	1.542	1035.
106.	.8497	6481.7	22.33	-123.84	-77.11	3.035	.952	1.541	1024.
108.	.8547	6331.5	21.78	-121.04	-74.03	3.064	.950	1.541	1014.
110.	.8597	6184.7	21.24	-118.23	-70.95	3.092	.947	1.541	1003.
112.	.8648	6041.4	20.72	-115.43	-67.87	3.120	.946	1.541	992.
114.	.8700	5901.6	20.20	-112.63	-64.78	3.147	.945	1.542	981.
116.	.8752	5765.3	19.70	-109.83	-61.70	3.174	.945	1.543	970.
118.	.8805	5632.5	19.22	-107.04	-58.61	3.200	.945	1.544	960.
120.	.8858	5503.1	18.74	-104.24	-55.52	3.226	.944	1.544	949.
122.	.8911	5377.0	18.27	-101.44	-52.43	3.252	.941	1.543	939.
124.	.8966	5254.2	17.82	-98.66	-49.35	3.277	.935	1.538	929.
126.	.9021	5134.6	17.38	-95.89	-46.28	3.301	.925	1.528	921.
128.	.9076	5017.9	16.95	-93.15	-43.23	3.325	.906	1.510	915.
130.	.9135	4928.2	16.90	-90.60	-40.36	3.347	.903	1.532	914.
132.	.9192	4816.8	16.42	-87.88	-37.32	3.371	.896	1.520	904.
134.	.9251	4705.9	16.00	-85.14	-34.25	3.394	.889	1.512	895.
136.	.9309	4621.7	15.62	-82.45	-31.25	3.416	.882	1.504	888.
138.	.9369	4508.2	15.25	-79.75	-28.22	3.438	.876	1.504	880.
140.	.9429	4412.6	14.99	-77.07	-25.21	3.460	.871	1.504	873.
142.	.9491	4317.1	14.69	-74.38	-22.16	3.481	.866	1.506	866.
144.	.9552	4234.8	14.40	-71.72	-19.18	3.502	.862	1.505	860.
146.	.9616	4131.7	14.10	-69.04	-16.15	3.523	.858	1.507	852.
148.	.9679	4036.5	13.82	-66.37	-13.14	3.544	.855	1.510	845.
150.	.9744	3948.9	13.54	-63.70	-10.11	3.564	.851	1.513	838.
152.	.9810	3860.9	13.26	-61.03	-7.08	3.584	.848	1.514	830.
154.	.9876	3771.7	12.97	-58.38	-4.08	3.604	.845	1.515	822.
156.	.9942	3706.0	12.67	-55.74	-1.06	3.623	.841	1.510	815.
158.	1.0010	3621.2	12.39	-53.10	1.95	3.642	.838	1.509	808.
160.	1.0079	3555.7	12.10	-50.41	5.03	3.662	.840	1.509	799.
165.	1.0254	3371.3	11.45	-43.78	12.62	3.708	.852	1.526	777.
170.	1.0435	3209.8	10.86	-37.14	20.25	3.754	.850	1.529	760.
175.	1.0622	3050.0	10.30	-30.53	27.89	3.798	.840	1.527	744.
180.	1.0816	2910.5	9.76	-23.98	35.51	3.841	.828	1.517	730.
185.	1.1016	2778.8	9.24	-17.51	43.08	3.883	.815	1.505	716.
190.	1.1221	2665.4	8.76	-11.13	50.58	3.923	.802	1.490	704.
195.	1.1430	2552.2	8.33	-4.87	58.00	3.961	.791	1.483	692.
200.	1.1646	2454.3	7.92	1.34	65.40	3.999	.782	1.476	680.
210.	1.2096	2272.0	7.15	13.56	80.09	4.070	.769	1.460	657.
220.	1.2570	2126.7	6.49	25.53	94.67	4.138	.761	1.448	636.
230.	1.3066	2004.9	5.92	37.25	109.08	4.202	.757	1.442	618.
240.	1.3573	1905.7	5.41	48.79	123.45	4.263	.754	1.432	602.
250.	1.4105	1828.9	4.95	60.14	137.72	4.322	.752	1.419	587.
260.	1.4647	1778.1	4.55	71.23	151.79	4.377	.750	1.400	576.
270.	1.5203	1732.7	4.20	82.09	165.70	4.429	.746	1.382	567.
280.	1.5766	1701.4	3.90	92.69	179.40	4.479	.742	1.362	559.
290.	1.6341	1679.5	3.62	103.07	192.95	4.527	.736	1.340	553.
300.	1.6922	1665.2	3.38	113.20	206.27	4.572	.729	1.318	548.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

600. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 60.954	.7455	10803.7	40.20	-190.04	-145.31	2.146	1.134	1.641	1250.
62.	.7477	10699.6	39.59	-188.45	-143.59	2.174	1.130	1.637	1245.
64.	.7518	10501.5	38.47	-185.43	-140.32	2.226	1.121	1.631	1236.
66.	.7560	10304.4	37.41	-182.43	-137.07	2.276	1.112	1.625	1227.
68.	.7601	10108.5	36.41	-179.43	-133.82	2.324	1.103	1.619	1218.
70.	.7643	9913.7	35.45	-176.45	-130.59	2.371	1.094	1.613	1209.
72.	.7685	9720.3	34.53	-173.48	-127.37	2.417	1.085	1.607	1200.
74.	.7727	9528.2	33.64	-170.53	-124.16	2.460	1.076	1.601	1191.
76.	.7769	9337.7	32.79	-167.58	-120.97	2.503	1.067	1.595	1182.
78.	.7812	9148.8	31.97	-164.65	-117.78	2.544	1.058	1.590	1172.
80.	.7854	8961.7	31.18	-161.73	-114.61	2.585	1.049	1.584	1163.
82.	.7898	8776.6	30.41	-158.83	-111.44	2.624	1.040	1.579	1154.
84.	.7941	8593.4	29.67	-155.94	-108.29	2.662	1.031	1.574	1145.
86.	.7985	8412.5	28.95	-153.05	-105.15	2.699	1.023	1.569	1136.
88.	.8029	8233.9	28.24	-150.18	-102.01	2.735	1.014	1.564	1127.
90.	.8073	8057.7	27.56	-147.33	-98.89	2.770	1.006	1.559	1117.
92.	.8118	7884.1	26.90	-144.48	-95.77	2.804	.999	1.555	1108.
94.	.8163	7713.2	26.25	-141.65	-92.67	2.837	.991	1.551	1098.
96.	.8209	7545.1	25.61	-138.82	-89.57	2.870	.984	1.547	1089.
98.	.8255	7380.0	25.00	-136.01	-86.48	2.902	.978	1.544	1079.
100.	.8301	7217.9	24.40	-133.20	-83.39	2.933	.972	1.541	1069.
102.	.8348	7058.9	23.81	-130.40	-80.32	2.964	.967	1.538	1059.
104.	.8395	6903.1	23.23	-127.61	-77.24	2.993	.963	1.536	1049.
106.	.8443	6750.6	22.67	-124.83	-74.17	3.023	.960	1.535	1039.
108.	.8491	6601.4	22.12	-122.05	-71.10	3.051	.957	1.534	1029.
110.	.8539	6455.5	21.59	-119.27	-68.03	3.080	.955	1.534	1018.
112.	.8588	6313.1	21.06	-116.49	-64.96	3.107	.954	1.534	1008.
114.	.8638	6174.0	20.55	-113.72	-61.90	3.134	.953	1.535	997.
116.	.8688	6038.4	20.05	-110.95	-58.82	3.161	.953	1.536	987.
118.	.8738	5906.1	19.57	-108.18	-55.75	3.187	.953	1.537	976.
120.	.8789	5777.1	19.09	-105.41	-52.68	3.213	.952	1.537	966.
122.	.8840	5651.5	18.63	-102.64	-49.60	3.239	.950	1.535	956.
124.	.8892	5529.0	18.18	-99.88	-46.53	3.264	.944	1.530	947.
126.	.8944	5409.7	17.74	-97.14	-43.48	3.288	.934	1.520	938.
128.	.8997	5293.3	17.31	-94.43	-40.45	3.312	.914	1.501	932.
130.	.9053	5208.4	17.37	-91.95	-37.63	3.334	.913	1.530	934.
132.	.9107	5101.3	16.88	-89.24	-34.60	3.357	.905	1.517	924.
134.	.9163	4986.1	16.42	-86.54	-31.56	3.380	.897	1.505	915.
136.	.9219	4911.1	16.02	-83.87	-28.55	3.402	.889	1.492	908.
138.	.9276	4793.9	15.67	-81.21	-25.56	3.424	.881	1.489	900.
140.	.9333	4700.8	15.37	-78.57	-22.57	3.445	.875	1.488	894.
142.	.9391	4605.9	15.09	-75.92	-19.58	3.466	.869	1.488	888.
144.	.9449	4527.3	14.82	-73.29	-16.60	3.487	.865	1.488	883.
146.	.9509	4420.4	14.54	-70.66	-13.61	3.508	.861	1.492	875.
148.	.9568	4323.2	14.25	-68.04	-10.63	3.528	.858	1.494	868.
150.	.9629	4234.4	13.97	-65.41	-7.63	3.548	.854	1.495	861.
152.	.9691	4144.7	13.71	-62.79	-4.64	3.568	.851	1.498	854.
154.	.9753	4053.6	13.44	-60.17	-1.66	3.588	.848	1.501	847.
156.	.9815	3999.9	13.17	-57.56	1.33	3.607	.845	1.497	842.
158.	.9878	3915.3	12.88	-54.97	4.31	3.626	.842	1.495	834.
160.	.9943	3844.0	12.58	-52.30	7.36	3.645	.844	1.496	825.
165.	1.0107	3659.9	11.90	-45.77	14.87	3.691	.857	1.509	803.
170.	1.0275	3506.5	11.30	-39.23	22.42	3.736	.854	1.508	787.
175.	1.0448	3335.2	10.76	-32.73	29.96	3.780	.844	1.507	772.
180.	1.0627	3186.3	10.24	-26.29	37.47	3.822	.832	1.500	758.
185.	1.0811	3049.7	9.72	-19.92	44.95	3.863	.813	1.489	744.
190.	1.1000	2937.1	9.21	-13.63	52.37	3.903	.808	1.472	732.
195.	1.1192	2820.7	8.75	-7.46	59.69	3.941	.796	1.458	719.
200.	1.1390	2722.5	8.35	-1.35	66.98	3.978	.786	1.450	709.
210.	1.1799	2528.4	7.61	10.67	81.46	4.049	.774	1.443	687.
220.	1.2228	2366.5	6.90	22.46	95.83	4.115	.765	1.426	664.
230.	1.2670	2242.9	6.32	34.00	110.02	4.178	.760	1.418	647.
240.	1.3131	2133.1	5.81	45.39	124.17	4.239	.758	1.413	631.
250.	1.3608	2038.1	5.35	56.61	138.26	4.296	.756	1.405	616.
260.	1.4098	1985.5	4.93	67.62	152.21	4.351	.753	1.385	604.
270.	1.4596	1929.6	4.56	78.40	165.98	4.403	.750	1.371	594.
280.	1.5102	1893.6	4.24	88.96	179.58	4.452	.745	1.351	586.
290.	1.5619	1861.7	3.95	99.31	193.02	4.500	.740	1.331	579.
300.	1.6142	1837.3	3.69	109.41	206.26	4.544	.733	1.312	573.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

650. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 61.479	.7441	10971.7	40.25	-189.71	-141.35	2.150	1.137	1.639	1258.
62.	.7451	10920.6	39.95	-188.93	-140.49	2.164	1.134	1.637	1256.
64.	.7492	10725.1	38.82	-185.92	-137.23	2.216	1.126	1.630	1246.
66.	.7532	10530.6	37.76	-182.93	-133.97	2.266	1.117	1.624	1237.
68.	.7573	10337.2	36.75	-179.96	-130.73	2.314	1.108	1.618	1228.
70.	.7614	10145.0	35.79	-176.99	-127.50	2.361	1.099	1.611	1220.
72.	.7655	9953.9	34.86	-174.04	-124.29	2.406	1.090	1.605	1211.
74.	.7696	9764.2	33.98	-171.10	-121.08	2.450	1.081	1.599	1202.
76.	.7737	9576.0	33.12	-168.18	-117.89	2.493	1.072	1.593	1193.
78.	.7779	9389.3	32.30	-165.27	-114.71	2.534	1.063	1.587	1184.
80.	.7821	9204.4	31.51	-162.37	-111.54	2.574	1.054	1.582	1175.
82.	.7863	9021.3	30.74	-159.49	-108.38	2.613	1.045	1.576	1166.
84.	.7905	8840.2	29.99	-156.61	-105.23	2.651	1.037	1.571	1157.
86.	.7947	8661.1	29.27	-153.75	-102.09	2.688	1.028	1.565	1148.
88.	.7990	8484.4	28.57	-150.90	-98.97	2.724	1.02.	1.560	1139.
90.	.8033	8310.0	27.88	-148.07	-95.85	2.759	1.012	1.555	1130.
92.	.8077	8138.1	27.22	-145.24	-92.74	2.793	1.004	1.551	1121.
94.	.8121	7968.8	26.57	-142.43	-89.65	2.826	.997	1.546	1112.
96.	.8165	7802.2	25.94	-139.63	-86.56	2.859	.991	1.542	1102.
98.	.8209	7638.5	25.32	-136.84	-83.48	2.891	.984	1.539	1093.
100.	.8254	7477.7	24.72	-134.05	-80.40	2.922	.979	1.536	1083.
102.	.8300	7319.9	24.13	-131.28	-77.33	2.952	.974	1.533	1073.
104.	.8345	7165.3	23.56	-128.51	-74.27	2.982	.970	1.531	1063.
106.	.8391	7013.8	23.00	-125.75	-71.21	3.011	.967	1.529	1053.
108.	.8437	6865.5	22.45	-122.99	-68.15	3.040	.964	1.528	1043.
110.	.8484	6720.5	21.92	-120.24	-65.09	3.068	.962	1.528	1033.
112.	.8531	6578.7	21.40	-117.49	-62.04	3.095	.961	1.528	1023.
114.	.8579	6440.3	20.89	-114.74	-58.98	3.122	.961	1.529	1012.
116.	.8627	6305.2	20.39	-111.99	-55.92	3.149	.961	1.530	1002.
118.	.8675	6173.4	19.90	-109.25	-52.86	3.175	.961	1.531	992.
120.	.8724	6044.9	19.43	-106.50	-49.80	3.201	.960	1.530	982.
122.	.8773	5919.5	18.97	-103.76	-46.74	3.226	.958	1.528	972.
124.	.8823	5797.3	18.51	-101.03	-43.68	3.251	.953	1.523	963.
126.	.8872	5678.2	18.08	-98.31	-40.64	3.275	.942	1.513	955.
128.	.8923	5562.0	17.65	-95.62	-37.63	3.299	.923	1.494	949.
130.	.8977	5448.0	17.70	-93.21	-34.86	3.320	.922	1.521	951.
132.	.9029	5377.3	17.27	-90.52	-31.83	3.343	.916	1.513	942.
134.	.9082	5259.6	16.81	-87.84	-28.80	3.366	.907	1.501	933.
13 .	.9136	5194.7	16.37	-85.18	-25.80	3.388	.897	1.483	927.
138.	.9189	5073.5	16.01	-82.56	-22.83	3.410	.883	1.477	919.
14 .	.9244	4983.2	15.69	-79.95	-19.87	3.431	.880	1.471	913.
142.	.9299	4889.0	15.42	-77.34	-16.90	3.452	.873	1.470	907.
144.	.9355	4814.2	15.18	-74.75	-13.94	3.473	.868	1.471	903.
146.	.9411	4703.1	14.93	-72.16	-10.99	3.493	.863	1.476	897.
148.	.9467	4603.9	14.69	-69.58	-8.04	3.513	.860	1.481	891.
15 .	.9525	4513.7	14.42	-66.98	-5.08	3.533	.856	1.483	884.
152.	.9583	4422.3	14.14	-64.40	-2.12	3.553	.853	1.484	877.
154.	.9641	4329.3	13.87	-61.83	.83	3.572	.851	1.487	870.
156.	.9701	4284.5	13.61	-59.25	3.81	3.591	.848	1.483	866.
158.	.9760	4211.0	13.36	-56.68	6.75	3.610	.845	1.483	860.
16 .	.9821	4126.1	13.08	-54.05	9.79	3.629	.848	1.488	851.
165.	.9974	3945.1	12.36	-47.60	17.24	3.675	.862	1.493	828.
170.	1.0133	3806.5	11.71	-41.13	24.73	3.720	.858	1.487	812.
175.	1.0294	3619.9	11.18	-34.73	32.17	3.763	.848	1.487	797.
180.	1.0460	3457.4	10.67	-28.39	39.60	3.805	.835	1.483	784.
185.	1.0630	3315.0	10.18	-22.11	46.99	3.845	.823	1.476	771.
190.	1.0807	3204.3	9.68	-15.89	54.35	3.885	.811	1.468	759.
195.	1.0983	3085.3	9.20	-9.80	61.59	3.922	.801	1.446	746.
200.	1.1167	2988.5	8.72	-3.77	68.82	3.959	.792	1.427	734.
21 .	1.1542	2782.1	8.01	8.06	83.08	4.028	.779	1.423	714.
220.	1.1934	2599.0	7.32	19.70	97.27	4.094	.770	1.416	691.
230.	1.2339	2481.5	6.70	31.11	111.32	4.157	.764	1.397	673.
24 .	1.2758	2364.8	6.18	42.35	125.28	4.216	.761	1.392	658.
25	1.3189	2246.0	5.72	53.43	139.16	4.273	.759	1.393	642.
260.	1.3638	2194.8	5.29	64.38	153.03	4.327	.757	1.373	631.
270.	1.4089	2128.2	4.91	75.09	166.67	4.379	.753	1.360	620.
280.	1.4550	2090.2	4.57	85.61	180.19	4.428	.749	1.341	612.
290.	1.5019	2047.8	4.26	95.92	193.54	4.475	.743	1.324	604.
300.	1.5492	2013.2	3.99	105.99	206.69	4.520	.737	1.306	597.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMOODYNAMIC PROPERTIES OF OXYGEN

700. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM OERIVATIVE BAR-CM^3/G	ISOCHORE OERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 62.000	.7426	11138.7	40.30	-189.38	-137.40	2.154	1.139	1.637	1265.
64.	.7466	10945.8	39.17	-186.39	-134.13	2.206	1.130	1.630	1257.
66.	.7506	10753.8	38.10	-183.42	-130.88	2.256	1.121	1.623	1248.
68.	.7546	10562.8	37.09	-180.46	-127.64	2.304	1.113	1.617	1239.
70.	.7586	10373.0	36.12	-177.51	-124.41	2.351	1.104	1.610	1230.
72.	.7626	10184.2	35.19	-174.58	-121.20	2.396	1.095	1.604	1222.
74.	.7666	9996.8	34.31	-171.66	-117.99	2.440	1.086	1.598	1213.
76.	.7707	9810.7	33.45	-168.75	-114.80	2.482	1.077	1.591	1204.
78.	.7747	9626.2	32.63	-165.86	-111.63	2.524	1.068	1.585	1196.
80.	.7788	9443.2	31.83	-162.98	-108.46	2.564	1.059	1.580	1187.
82.	.7829	9262.1	31.06	-160.11	-105.31	2.603	1.050	1.574	1178.
84.	.7870	9082.9	30.31	-157.26	-102.17	2.641	1.042	1.568	1169.
86.	.7912	8905.7	29.59	-154.42	-99.03	2.677	1.033	1.563	1160.
88.	.7953	8730.6	28.88	-151.59	-95.91	2.713	1.025	1.557	1151.
90.	.7995	8557.9	28.20	-148.77	-92.80	2.748	1.018	1.552	1143.
92.	.8038	8387.6	27.53	-145.97	-89.70	2.782	1.010	1.547	1133.
94.	.8080	8219.8	26.88	-143.18	-86.61	2.815	1.003	1.543	1124.
96.	.8123	8054.6	26.25	-140.39	-83.53	2.848	.997	1.538	1115.
98.	.8166	7892.2	25.63	-137.62	-80.46	2.880	.991	1.535	1106.
100.	.8210	7732.6	25.03	-134.86	-77.39	2.911	.985	1.531	1096.
102.	.8254	7576.0	24.44	-132.11	-74.33	2.941	.980	1.529	1087.
104.	.8298	7422.3	23.87	-129.36	-71.28	2.971	.977	1.526	1077.
106.	.8342	7271.7	23.31	-126.62	-68.23	3.000	.973	1.525	1067.
108.	.8387	7124.3	22.77	-123.89	-65.18	3.028	.971	1.524	1057.
110.	.8432	6980.0	22.23	-121.16	-62.13	3.056	.969	1.523	1047.
112.	.8477	6838.9	21.71	-118.43	-59.09	3.083	.969	1.523	1037.
114.	.8523	6701.1	21.20	-115.70	-56.04	3.110	.968	1.524	1027.
116.	.8569	6566.5	20.70	-112.98	-52.99	3.137	.969	1.525	1017.
118.	.8616	6435.0	20.22	-110.25	-49.94	3.163	.969	1.525	1007.
120.	.8663	6306.8	19.75	-107.53	-46.89	3.189	.968	1.525	997.
122.	.8710	6181.7	19.28	-104.81	-43.84	3.214	.966	1.523	987.
124.	.8757	6059.7	18.83	-102.10	-40.79	3.239	.961	1.518	978.
126.	.8805	5940.7	18.39	-99.40	-37.77	3.263	.951	1.507	970.
128.	.8853	5824.6	17.97	-96.74	-34.76	3.286	.932	1.488	964.
130.	.8906	5749.4	18.00	-94.38	-32.04	3.307	.932	1.513	966.
132.	.8956	5647.4	17.58	-91.71	-29.02	3.330	.926	1.506	958.
134.	.9006	5527.1	17.14	-89.05	-26.01	3.353	.918	1.496	949.
136.	.9058	5473.0	16.70	-86.40	-23.00	3.375	.908	1.477	943.
138.	.9109	5347.6	16.29	-83.81	-20.04	3.397	.897	1.465	935.
140.	.9161	5260.4	15.95	-81.22	-17.10	3.418	.887	1.455	929.
142.	.3214	5166.9	15.66	-78.65	-14.15	3.439	.878	1.452	924.
144.	.9267	5095.9	15.44	-76.09	-11.22	3.460	.87.	1.450	921.
146.	.9320	4980.6	15.26	-73.55	-8.31	3.480	.865	1.459	916.
148.	.9373	4879.1	15.04	-71.00	-5.39	3.500	.861	1.464	911.
150.	.9428	4787.5	14.81	-68.45	-2.46	3.519	.858	1.469	905.
152.	.9483	4694.3	14.58	-65.91	.47	3.539	.855	1.474	900.
154.	.9538	4599.5	14.32	-63.37	3.39	3.558	.852	1.477	893.
156.	.9595	4554.2	14.04	-60.81	6.36	3.577	.850	1.471	888.
158.	.9652	4510.5	13.78	-58.27	9.29	3.596	.847	1.467	884.
160.	.9709	4402.0	13.54	-55.68	12.29	3.614	.851	1.478	875.
165.	.9854	4227.7	12.86	-49.28	19.69	3.660	.866	1.492	854.
170.	1.0004	4111.3	12.14	-42.86	27.17	3.705	.863	1.473	838.
175.	1.0155	3905.8	11.55	-36.56	34.52	3.747	.851	1.468	821.
180.	1.0309	3724.4	11.06	-30.32	41.85	3.789	.838	1.467	807.
185.	1.0469	3575.0	10.59	-24.12	49.16	3.829	.826	1.462	795.
190.	1.0634	3467.3	10.12	-17.97	56.47	3.868	.814	1.449	786.
195.	1.0799	3346.3	9.65	-11.95	63.65	3.905	.805	1.438	773.
200.	1.0970	3252.6	9.17	-5.96	70.84	3.941	.796	1.419	761.
210.	1.1317	3033.0	8.36	5.71	84.93	4.010	.782	1.402	737.
220.	1.1677	2823.2	7.73	17.18	98.92	4.075	.774	1.408	717.
230.	1.2053	2720.4	7.06	28.52	112.89	4.137	.769	1.381	699.
240.	1.2438	2601.8	6.53	39.63	126.76	4.196	.765	1.373	683.
250.	1.2829	2451.8	6.07	50.55	140.35	4.252	.763	1.380	666.
260.	1.3245	2404.9	5.64	61.45	154.17	4.306	.760	1.363	657.
270.	1.3657	2327.6	5.24	72.09	167.65	4.357	.757	1.351	645.
280.	1.4082	2290.0	4.86	82.58	181.15	4.406	.752	1.331	636.
290.	1.4510	2236.5	4.57	92.84	194.40	4.452	.747	1.317	628.
300.	1.4941	2191.6	4.28	102.88	207.47	4.497	.741	1.301	620.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

750. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 62.518	.7412	11304.7	40.35	-189.05	-133.46	2.157	1.141	1.636	1273.
64.	.7441	11163.7	39.51	-186.84	-131.04	2.196	1.135	1.630	1266.
66.	.7480	10974.1	38.44	-183.88	-127.78	2.246	1.126	1.623	1258.
68.	.7519	10785.5	37.42	-180.94	-124.54	2.294	1.117	1.616	1249.
70.	.7558	10597.9	36.45	-178.01	-121.32	2.341	1.108	1.609	1241.
72.	.7598	10411.3	35.52	-175.09	-118.11	2.386	1.099	1.603	1232.
74.	.7637	10226.0	34.63	-172.19	-114.91	2.430	1.090	1.596	1224.
76.	.7677	10042.0	33.77	-169.30	-111.72	2.472	1.081	1.590	1215.
78.	.7717	9859.5	32.94	-166.42	-108.55	2.514	1.073	1.584	1207.
80.	.7756	9678.5	32.14	-163.56	-105.38	2.554	1.064	1.578	1198.
82.	.7796	9499.2	31.37	-160.71	-102.23	2.593	1.055	1.572	1189.
84.	.7837	9321.8	30.62	-157.87	-99.10	2.630	1.047	1.566	1181.
86.	.7877	9146.3	29.89	-155.05	-95.97	2.667	1.039	1.560	1172.
88.	.7918	8972.9	29.19	-152.24	-92.85	2.703	1.031	1.554	1163.
90.	.7959	8801.7	28.50	-149.44	-89.75	2.738	1.023	1.549	1154.
92.	.8000	8632.9	27.83	-146.66	-86.66	2.772	1.016	1.544	1146.
94.	.8041	8466.4	27.18	-143.88	-83.57	2.805	1.009	1.539	1137.
96.	.8083	8302.6	26.55	-141.12	-80.50	2.837	1.002	1.535	1128.
98.	.8125	8141.4	25.93	-138.37	-77.43	2.869	.997	1.531	1118.
100.	.8167	7982.9	25.33	-135.63	-74.37	2.900	.991	1.528	1109.
102.	.8210	7827.3	24.75	-132.89	-71.32	2.930	.987	1.525	1100.
104.	.8252	7674.6	24.17	-130.17	-68.27	2.960	.983	1.522	1090.
106.	.8295	7524.9	23.61	-127.45	-65.23	2.989	.980	1.521	1080.
108.	.8339	7378.2	23.07	-124.73	-62.19	3.017	.978	1.519	1071.
110.	.8382	7234.6	22.53	-122.02	-59.15	3.045	.976	1.519	1061.
112.	.8426	7094.1	22.01	-119.31	-56.12	3.072	.976	1.519	1051.
114.	.8470	6956.7	21.50	-116.60	-53.08	3.099	.976	1.519	1041.
116.	.8515	6822.5	21.01	-113.90	-50.04	3.126	.976	1.520	1031.
118.	.8560	6691.4	20.52	-111.19	-47.00	3.152	.976	1.521	1021.
120.	.8605	6563.4	20.05	-108.49	-43.95	3.177	.976	1.520	1011.
122.	.8650	6438.5	19.59	-105.79	-40.91	3.202	.974	1.518	1002.
124.	.8696	6316.7	19.13	-103.10	-37.88	3.227	.969	1.513	993.
126.	.8742	6197.7	18.70	-100.42	-34.86	3.251	.959	1.502	985.
128.	.8788	6081.7	18.27	-97.78	-31.87	3.275	.940	1.483	979.
130.	.8839	6011.1	18.28	-95.47	-29.18	3.295	.941	1.506	981.
132.	.8887	5912.2	17.86	-92.82	-26.17	3.318	.937	1.499	973.
134.	.8935	5789.0	17.43	-90.18	-23.17	3.341	.929	1.491	964.
136.	.8986	5746.6	16.99	-87.54	-20.15	3.363	.920	1.471	959.
138.	.9034	5616.7	16.55	-84.96	-17.21	3.385	.909	1.458	949.
140.	.9084	5532.8	16.15	-82.40	-14.27	3.406	.897	1.441	943.
142.	.9134	5440.1	15.84	-79.85	-11.35	3.427	.886	1.432	938.
144.	.9186	5373.0	15.64	-77.32	-8.43	3.447	.877	1.430	936.
146.	.9236	5253.2	15.43	-74.82	-5.55	3.467	.869	1.434	931.
148.	.9287	5149.4	15.28	-72.33	-2.68	3.486	.863	1.442	927.
150.	.9339	5056.4	15.16	-69.91	.22	3.506	.859	1.453	925.
152.	.9391	4961.2	14.94	-67.31	3.12	3.525	.856	1.459	920.
154.	.9442	4864.5	14.74	-64.81	6.00	3.544	.853	1.466	914.
156.	.9498	4801.7	14.50	-62.27	8.97	3.563	.851	1.467	910.
158.	.9553	4816.5	14.23	-59.74	11.90	3.582	.848	1.454	909.
160.	.9606	4671.5	13.96	-57.19	14.86	3.600	.852	1.468	897.
162.	.9744	4507.8	13.34	-50.86	22.22	3.646	.868	1.487	879.
170.	.9889	4422.7	12.61	-44.46	29.70	3.690	.867	1.464	864.
175.	1.0029	4194.0	11.94	-38.23	36.99	3.733	.856	1.455	844.
180.	1.0173	3987.9	11.41	-32.08	44.22	3.773	.842	1.450	829.
185.	1.0323	3830.1	10.96	-25.98	51.45	3.813	.829	1.447	818.
190.	1.0479	3726.5	10.51	-19.89	58.71	3.852	.817	1.436	809.
195.	1.0634	3604.0	10.08	-13.93	65.83	3.889	.808	1.429	799.
200.	1.0795	3515.1	9.61	-7.98	72.99	3.925	.80	1.413	788.
210.	1.1118	3281.2	8.71	3.59	86.97	3.993	.787	1.387	760.
220.	1.1448	3037.9	8.07	14.87	100.73	4.057	.778	1.396	738.
230.	1.1802	2959.7	7.47	26.15	114.67	4.119	.773	1.377	726.
240.	1.2161	2844.9	6.85	37.19	128.39	4.177	.769	1.354	708.
250.	1.2514	2655.2	6.39	47.94	141.80	4.232	.766	1.369	689.
260.	1.2904	2615.2	5.95	58.79	155.57	4.286	.763	1.350	680.
270.	1.3283	2527.1	5.57	69.35	168.97	4.337	.760	1.345	669.
280.	1.3675	2492.4	5.19	79.81	182.41	4.386	.756	1.323	660.
290.	1.4072	2426.9	4.86	90.02	195.56	4.432	.751	1.310	651.
300.	1.4467	2371.7	4.57	100.02	208.53	4.476	.744	1.297	643.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

800. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 63.033	.7398	11469.7	40.39	-188.70	-129.52	2.161	1.143	1.634	1280.
64.	.7416	11378.9	39.85	-187.28	-127.94	2.186	1.139	1.630	1276.
66.	.7455	11191.6	38.77	-184.33	-124.69	2.236	1.130	1.623	1268.
68.	.7493	11005.3	37.75	-181.40	-121.45	2.284	1.121	1.616	1259.
70.	.7532	10819.8	36.77	-178.48	-118.23	2.331	1.113	1.609	1251.
72.	.7571	10635.4	35.84	-175.58	-115.02	2.376	1.104	1.602	1243.
74.	.7609	10452.2	34.94	-172.69	-111.82	2.420	1.095	1.595	1234.
76.	.7648	10270.2	34.08	-169.82	-108.63	2.463	1.086	1.589	1226.
78.	.7687	10089.5	33.25	-166.96	-105.46	2.504	1.077	1.582	1217.
80.	.7726	9910.4	32.45	-164.11	-102.30	2.544	1.069	1.576	1209.
82.	.7765	9732.9	31.67	-161.28	-99.16	2.583	1.060	1.570	1200.
84.	.7804	9557.1	30.92	-158.46	-96.02	2.620	1.052	1.564	1192.
86.	.7844	9383.3	30.19	-155.65	-92.90	2.657	1.044	1.558	1183.
88.	.7884	9211.4	29.49	-152.86	-89.79	2.693	1.036	1.552	1175.
90.	.7923	9041.7	28.80	-150.08	-86.69	2.728	1.028	1.547	1166.
92.	.7964	8874.2	28.13	-147.31	-83.60	2.762	1.021	1.541	1157.
94.	.8004	8709.1	27.48	-144.56	-80.52	2.795	1.014	1.537	1149.
96.	.8044	8546.5	26.84	-141.81	-77.46	2.827	1.008	1.532	1140.
98.	.8085	8386.4	26.23	-139.08	-74.40	2.859	1.003	1.528	1131.
100.	.8126	8229.0	25.62	-136.35	-71.34	2.889	.998	1.524	1121.
102.	.8167	8074.3	25.04	-133.64	-68.30	2.920	.993	1.521	1112.
104.	.8209	7922.5	24.46	-130.93	-65.25	2.949	.990	1.519	1103.
106.	.8251	7773.6	23.90	-128.23	-62.22	2.978	.987	1.517	1093.
108.	.8293	7627.6	23.36	-125.53	-59.19	3.006	.985	1.516	1084.
110.	.8335	7484.6	22.82	-122.84	-56.16	3.034	.983	1.515	1074.
112.	.8377	7344.6	22.30	-120.15	-53.13	3.061	.983	1.515	1064.
114.	.8420	7207.6	21.79	-117.46	-50.10	3.088	.983	1.516	1054.
116.	.8463	7073.8	21.29	-114.77	-47.07	3.115	.984	1.516	1044.
118.	.8506	6942.9	20.81	-112.08	-44.03	3.141	.984	1.517	1034.
120.	.8550	6815.2	20.33	-109.40	-41.00	3.166	.984	1.516	1025.
122.	.8594	6690.4	19.87	-106.71	-37.97	3.191	.982	1.514	1016.
124.	.8638	6568.6	19.42	-104.04	-34.94	3.216	.977	1.509	1007.
126.	.8682	6449.7	18.98	-101.38	-31.93	3.240	.967	1.498	999.
128.	.8726	6333.6	18.55	-98.76	-28.95	3.263	.949	1.479	993.
130.	.8776	6267.7	18.54	-96.49	-26.29	3.284	.950	1.499	994.
132.	.8822	6171.9	18.12	-93.86	-23.29	3.307	.947	1.493	987.
134.	.8868	6045.9	17.70	-91.24	-20.29	3.329	.940	1.486	978.
136.	.8918	6015.8	17.26	-88.60	-17.26	3.352	.931	1.467	973.
138.	.8964	5881.3	16.82	-86.04	-14.33	3.373	.921	1.455	964.
140.	.9012	5800.9	16.38	-83.48	-11.39	3.394	.910	1.436	957.
142.	.9060	5708.9	15.95	-80.96	-8.47	3.415	.897	1.417	949.
144.	.9110	5645.9	15.67	-78.45	-5.57	3.435	.885	1.405	947.
146.	.9157	5521.4	15.50	-75.99	-2.73	3.455	.875	1.408	942.
148.	.9206	5415.2	15.40	-73.54	.11	3.474	.868	1.417	940.
150.	.9255	5320.7	15.26	-71.07	2.97	3.493	.861	1.424	933.
152.	.9305	5223.6	15.19	-68.61	5.83	3.512	.857	1.438	936.
154.	.9354	5125.0	15.07	-66.16	8.67	3.531	.853	1.451	933.
156.	.9407	5016.7	14.87	-63.69	11.61	3.550	.851	1.459	928.
158.	.9462	5130.9	14.66	-61.11	14.58	3.569	.849	1.441	933.
160.	.9511	4934.1	14.43	-58.61	17.47	3.587	.852	1.463	920.
165.	.9643	4785.6	13.77	-52.34	24.80	3.632	.869	1.477	902.
170.	.9783	4741.7	13.12	-45.95	32.31	3.677	.870	1.460	892.
175.	.9914	4485.9	12.39	-39.78	39.53	3.719	.860	1.449	869.
180.	1.0049	4248.5	11.76	-33.70	46.69	3.759	.845	1.438	850.
185.	1.0190	4086.6	11.29	-27.68	53.83	3.798	.832	1.432	838.
190.	1.0339	3982.2	10.86	-21.65	61.06	3.837	.820	1.422	831.
195.	1.0484	3858.7	10.45	-15.76	68.11	3.873	.810	1.417	821.
200.	1.0638	3776.2	10.03	-9.35	75.25	3.909	.802	1.405	813.
210.	1.0939	3526.7	9.15	1.62	89.14	3.977	.791	1.388	786.
220.	1.1243	3242.1	8.36	12.76	102.70	4.040	.782	1.381	757.
230.	1.1580	3199.5	7.80	23.97	116.61	4.102	.777	1.363	749.
240.	1.1916	3094.8	7.21	34.97	130.30	4.160	.774	1.346	734.
250.	1.2236	2855.8	6.68	45.56	143.45	4.214	.771	1.356	709.
260.	1.2605	2825.4	6.25	56.37	157.21	4.268	.767	1.337	702.
270.	1.2955	2720.1	5.86	66.83	170.47	4.318	.763	1.335	690.
280.	1.3328	2696.7	5.49	77.28	183.90	4.367	.759	1.316	684.
290.	1.3690	2618.4	5.15	87.44	196.96	4.413	.754	1.305	673.
300.	1.4054	2552.9	4.84	97.40	209.83	4.456	.748	1.292	664.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

850. BAR ISOBAR

TEMPERATURE K	VOLUME CM3/G	ISOTHERM DERIVATIVE BAR-CM3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	Cv J/G-K	Cp J/G-K	VELOCITY OF SOUND M/S
* 63.545	.7384	11633.8	40.44	-188.38	-125.60	2.165	1.146	1.633	1288.
64.	.7392	11591.6	40.19	-187.69	-124.85	2.176	1.144	1.631	1286.
66.	.7430	11406.5	39.10	-184.76	-121.66	2.226	1.135	1.623	1277.
68.	.7468	11222.3	38.08	-181.84	-118.36	2.275	1.128	1.616	1269.
70.	.7506	11039.0	37.09	-178.34	-115.14	2.322	1.117	1.608	1261.
72.	.7544	10856.6	36.16	-176.05	-111.93	2.367	1.108	1.601	1253.
74.	.7582	10675.3	35.26	-173.18	-108.73	2.411	1.099	1.595	1244.
76.	.7620	10495.2	34.39	-170.32	-105.55	2.453	1.090	1.588	1236.
78.	.7658	10316.4	33.56	-167.47	-102.38	2.494	1.082	1.581	1228.
80.	.7696	10139.1	32.75	-164.64	-99.22	2.534	1.073	1.575	1220.
82.	.7735	9963.3	31.97	-161.82	-96.08	2.573	1.065	1.568	1211.
84.	.7773	9789.1	31.22	-159.02	-92.95	2.611	1.057	1.562	1203.
86.	.7812	9616.8	30.49	-156.23	-89.83	2.647	1.049	1.556	1194.
88.	.7850	9446.4	29.78	-153.45	-86.72	2.683	1.041	1.550	1186.
90.	.7889	9278.1	29.09	-150.69	-83.63	2.718	1.034	1.544	1177.
92.	.7928	9111.9	28.42	-147.94	-80.54	2.752	1.027	1.539	1169.
94.	.7968	8948.0	27.76	-145.20	-77.47	2.785	1.020	1.534	1160.
96.	.8007	8786.5	27.13	-142.47	-74.41	2.817	1.014	1.529	1151.
98.	.8047	8627.5	26.51	-139.75	-71.35	2.848	1.008	1.525	1142.
100.	.8087	8471.1	25.90	-137.04	-68.30	2.879	1.004	1.522	1133.
102.	.8127	8317.3	25.32	-134.34	-65.26	2.909	.999	1.518	1124.
104.	.8167	8166.3	24.74	-131.65	-62.23	2.939	.996	1.516	1115.
106.	.8208	8018.1	24.18	-128.96	-59.20	2.968	.993	1.514	1106.
108.	.8248	7872.7	23.63	-126.28	-56.17	2.996	.991	1.513	1096.
110.	.8289	7730.2	23.10	-123.61	-53.15	3.024	.990	1.512	1086.
112.	.8331	7590.7	22.56	-120.94	-50.13	3.051	.990	1.512	1077.
114.	.8372	7454.1	22.07	-118.26	-47.10	3.078	.990	1.512	1067.
116.	.8414	7320.6	21.57	-115.59	-44.08	3.104	.991	1.513	1057.
118.	.8455	7190.0	21.08	-112.92	-41.05	3.130	.992	1.513	1047.
120.	.8497	7062.3	20.61	-110.25	-36.02	3.155	.992	1.513	1038.
122.	.8540	6937.7	20.15	-107.53	-35.00	3.180	.990	1.510	1029.
124.	.8582	6815.9	19.69	-104.93	-31.98	3.205	.985	1.505	1020.
126.	.8625	6697.0	19.25	-102.29	-28.97	3.229	.975	1.494	1013.
128.	.8668	6580.8	18.82	-99.67	-26.00	3.252	.957	1.475	1007.
130.	.8716	6519.5	18.76	-97.45	-23.37	3.273	.959	1.494	1008.
132.	.8760	6427.2	18.37	-94.83	-20.37	3.295	.956	1.488	1000.
134.	.8805	6298.2	17.95	-92.23	-17.39	3.318	.950	1.482	991.
136.	.8853	6280.9	17.51	-89.59	-14.34	3.340	.942	1.463	987.
138.	.8697	6141.6	17.08	-87.05	-11.42	3.362	.933	1.452	978.
140.	.8944	6064.9	16.63	-84.49	-8.47	3.383	.922	1.433	971.
142.	.8991	5973.6	16.19	-81.97	-5.56	3.404	.910	1.414	963.
144.	.9039	5914.8	15.76	-79.47	-2.65	3.424	.898	1.392	958.
146.	.9084	5785.5	15.45	-77.05	.16	3.443	.886	1.383	950.
146.	.9130	5676.9	15.30	-74.64	2.96	3.462	.875	1.384	947.
150.	.9177	5580.7	15.27	-72.22	5.79	3.481	.866	1.394	948.
152.	.9225	5481.7	15.21	-69.81	8.60	3.500	.860	1.405	947.
154.	.9271	5381.2	15.15	-67.40	11.40	3.518	.855	1.419	945.
156.	.9321	5186.2	15.16	-64.95	14.28	3.537	.851	1.451	940.
158.	.9378	5456.0	14.97	-62.39	17.33	3.556	.843	1.420	955.
160.	.9423	5189.5	14.81	-59.96	20.14	3.574	.852	1.453	941.
165.	.9549	5061.2	14.23	-53.73	27.44	3.619	.870	1.472	925.
170.	.9686	5069.4	13.55	-47.35	34.99	3.664	.871	1.448	918.
175.	.9809	4782.3	12.93	-41.24	42.14	3.705	.863	1.452	897.
180.	.9935	4506.8	12.20	-35.22	49.23	3.745	.851	1.437	873.
185.	1.0068	4326.9	11.58	-29.26	56.32	3.784	.836	1.418	856.
190.	1.0210	4234.6	11.17	-23.29	63.50	3.822	.823	1.407	851.
195.	1.0348	4110.6	10.78	-17.46	70.56	3.859	.813	1.404	843.
200.	1.0495	4036.2	10.38	-11.59	77.61	3.895	.805	1.393	836.
210.	1.0777	3769.4	9.57	-.22	91.39	3.962	.794	1.387	811.
220.	1.1057	3434.9	8.74	10.81	104.79	4.024	.787	1.385	778.
230.	1.1382	3439.7	8.07	21.98	118.72	4.086	.780	1.345	770.
240.	1.1700	3352.1	7.55	32.91	132.36	4.144	.777	1.336	759.
250.	1.1988	3053.5	7.02	43.36	145.26	4.197	.775	1.354	731.
260.	1.2339	3035.2	6.51	54.15	159.03	4.251	.771	1.323	722.
270.	1.2665	2924.3	6.14	64.52	172.17	4.301	.767	1.325	711.
280.	1.3018	2902.3	5.77	74.94	185.59	4.349	.762	1.306	705.
290.	1.3353	2810.5	5.44	85.05	198.54	4.395	.757	1.301	695.
300.	1.3690	2734.8	5.12	94.96	211.33	4.438	.751	1.290	685.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

900. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 64.052	.7370	11797.0	40.49	-188.01	-121.68	2.168	1.148	1.631	1295.
66.	.7406	11618.9	39.43	-185.17	-118.51	2.217	1.139	1.623	1287.
68.	.7444	11436.8	38.40	-182.26	-115.27	2.265	1.130	1.616	1279.
70.	.7481	11255.5	37.41	-179.37	-112.05	2.312	1.121	1.608	1271.
72.	.7518	11075.1	36.47	-176.50	-108.84	2.357	1.112	1.601	1263.
74.	.7555	10895.7	35.56	-173.64	-105.64	2.401	1.104	1.594	1254.
76.	.7593	10717.4	34.69	-170.79	-102.46	2.444	1.095	1.587	1246.
78.	.7630	10540.4	33.85	-167.96	-99.29	2.485	1.086	1.580	1238.
80.	.7667	10364.7	33.05	-165.15	-96.14	2.525	1.078	1.573	1230.
82.	.7705	10190.5	32.26	-162.34	-93.00	2.563	1.070	1.567	1222.
84.	.7743	10017.9	31.51	-159.55	-89.87	2.601	1.062	1.561	1214.
86.	.7780	9847.1	30.77	-156.78	-86.75	2.638	1.054	1.554	1205.
88.	.7818	9678.1	30.06	-154.02	-83.65	2.673	1.046	1.548	1197.
90.	.7856	9511.1	29.37	-151.27	-80.56	2.708	1.039	1.543	1188.
92.	.7894	9346.1	28.70	-148.53	-77.48	2.742	1.032	1.537	1180.
94.	.7933	9183.4	28.04	-145.80	-74.41	2.775	1.026	1.532	1171.
96.	.7971	9023.0	27.40	-143.09	-71.35	2.807	1.020	1.527	1163.
98.	.8010	8865.0	26.78	-140.39	-68.30	2.839	1.014	1.523	1154.
100.	.8049	8709.5	26.18	-137.70	-65.26	2.869	1.009	1.519	1145.
102.	.8088	8556.5	25.59	-135.01	-62.22	2.899	1.005	1.516	1136.
104.	.8127	8406.2	25.01	-132.34	-59.19	2.929	1.002	1.513	1127.
106.	.8167	8258.6	24.45	-129.67	-56.17	2.958	1.000	1.511	1117.
108.	.8206	8113.8	23.90	-127.00	-53.15	2.986	.998	1.510	1108.
110.	.8246	7971.9	23.37	-124.34	-50.13	3.014	.997	1.509	1099.
112.	.8286	7832.8	22.84	-121.68	-47.11	3.041	.997	1.509	1089.
114.	.8326	7696.5	22.33	-119.02	-44.09	3.068	.997	1.509	1079.
116.	.8366	7563.2	21.83	-116.37	-41.07	3.094	.998	1.510	1070.
118.	.8407	7432.8	21.35	-113.71	-38.05	3.120	.999	1.510	1060.
120.	.8447	7305.3	20.87	-111.06	-35.03	3.145	.999	1.510	1051.
122.	.8488	7180.7	20.41	-108.41	-32.01	3.170	.998	1.507	1042.
124.	.8529	7058.9	19.96	-105.76	-29.00	3.194	.993	1.502	1033.
126.	.8571	6939.9	19.51	-103.14	-26.00	3.218	.984	1.491	1026.
128.	.8612	6823.7	19.08	-100.54	-23.03	3.242	.965	1.472	1020.
130.	.8659	6766.8	18.97	-98.35	-20.42	3.262	.968	1.486	1019.
132.	.8702	6678.1	18.61	-95.74	-17.42	3.285	.965	1.483	1013.
134.	.8745	6546.1	18.19	-93.16	-14.45	3.307	.960	1.478	1004.
136.	.8793	6542.3	17.75	-90.52	-11.38	3.330	.953	1.459	1001.
138.	.8835	6398.0	17.33	-87.99	-8.46	3.351	.945	1.450	991.
140.	.8880	6325.2	16.88	-85.44	-5.52	3.372	.934	1.432	984.
142.	.8925	6234.7	16.43	-82.93	-2.66	3.393	.923	1.413	977.
144.	.8972	6180.1	15.99	-80.42	.32	3.413	.911	1.390	971.
146.	.9015	6045.8	15.57	-78.02	3.12	3.433	.899	1.375	962.
148.	.9059	5934.8	15.17	-75.63	5.90	3.451	.887	1.357	953.
150.	.9104	5836.9	15.04	-73.25	8.69	3.470	.875	1.357	951.
152.	.9149	5735.8	15.03	-70.89	11.46	3.488	.866	1.367	952.
154.	.9194	5633.5	15.13	-68.53	14.21	3.506	.858	1.387	954.
156.	.9239	5292.1	15.08	-66.17	16.96	3.524	.853	1.425	940.
158.	.9300	5793.4	15.12	-63.56	20.14	3.544	.849	1.388	973.
160.	.9340	5436.9	15.12	-61.21	22.84	3.561	.852	1.439	958.
163.	.9462	5334.6	14.69	-55.04	30.12	3.606	.870	1.467	949.
170.	.9597	5406.4	13.96	-48.65	37.73	3.652	.872	1.436	944.
175.	.9713	5084.2	13.40	-42.62	44.75	3.693	.865	1.448	923.
180.	.9830	4763.1	12.76	-36.66	51.81	3.732	.854	1.448	899.
185.	.9955	4569.2	12.02	-30.73	58.87	3.771	.840	1.421	879.
190.	1.0092	4483.9	11.40	-24.79	66.04	3.809	.827	1.388	868.
195.	1.0223	4359.8	11.08	-19.03	72.98	3.845	.816	1.389	862.
200.	1.0364	4295.2	10.69	-13.20	80.07	3.881	.807	1.379	857.
210.	1.0630	4009.5	9.97	-1.95	93.72	3.948	.797	1.385	835.
220.	1.0887	3815.3	9.19	8.94	106.92	4.009	.791	1.401	800.
230.	1.1202	3680.5	8.30	20.17	120.99	4.072	.785	1.325	788.
240.	1.1507	3617.2	7.82	31.03	134.59	4.129	.780	1.318	782.
250.	1.1764	3248.2	7.40	41.30	147.18	4.181	.774	1.361	754.
260.	1.2102	3244.2	6.79	52.11	161.03	4.235	.775	1.315	742.
270.	1.2405	3121.4	6.39	62.40	174.04	4.284	.770	1.314	730.
280.	1.2742	3109.0	6.02	72.80	187.47	4.333	.766	1.295	725.
290.	1.3053	3002.8	5.70	82.83	200.36	4.378	.760	1.294	715.
300.	1.3366	2917.0	5.39	92.70	212.99	4.421	.754	1.288	706.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

950. BAR ISOBAR

TEMPERATURE K	VOLUME CM^3/G	ISOTHERM DERIVATIVE BAR-CM^3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	C_V J/G-K	C_P J/G-K	VELOCITY OF SOUND M/S
* 64.557	.7357	11959.3	40.54	-187.66	-117.77	2.172	1.150	1.630	1302.
66.	.7383	11828.9	39.75	-185.56	-115.42	2.208	1.143	1.624	1296.
68.	.7420	11648.8	38.71	-182.67	-112.18	2.256	1.134	1.616	1288.
70.	.7456	11469.5	37.72	-179.79	-108.96	2.303	1.125	1.608	1280.
72.	.7493	11291.0	36.77	-176.93	-105.75	2.348	1.117	1.601	1272.
74.	.7529	11113.4	35.86	-174.08	-102.55	2.392	1.108	1.594	1264.
76.	.7566	10936.9	34.99	-171.25	-99.37	2.434	1.099	1.586	1256.
78.	.7603	10761.5	34.15	-168.43	-96.21	2.475	1.091	1.579	1248.
80.	.7639	10587.5	33.34	-165.63	-93.05	2.515	1.083	1.573	1240.
82.	.7676	10414.8	32.55	-162.84	-89.92	2.554	1.074	1.566	1232.
84.	.7713	10243.7	31.79	-160.06	-86.79	2.592	1.066	1.559	1224.
86.	.7750	10074.3	31.05	-157.30	-83.68	2.628	1.059	1.553	1216.
88.	.7787	9906.6	30.34	-154.55	-80.58	2.664	1.051	1.547	1207.
90.	.7824	9740.8	29.64	-151.82	-77.49	2.699	1.044	1.541	1199.
92.	.7862	9577.1	28.97	-149.10	-74.41	2.733	1.037	1.535	1191.
94.	.7899	9415.4	28.31	-146.39	-71.34	2.765	1.031	1.530	1182.
96.	.7937	9256.0	27.67	-143.69	-68.29	2.798	1.025	1.525	1174.
98.	.7974	9099.0	27.05	-141.00	-65.24	2.829	1.020	1.521	1165.
100.	.8012	8944.3	26.44	-138.32	-62.20	2.860	1.015	1.517	1156.
102.	.8050	8792.1	25.85	-135.65	-59.17	2.890	1.011	1.514	1147.
104.	.8089	8642.5	25.27	-132.99	-56.15	2.919	1.008	1.511	1138.
106.	.8127	8495.5	24.71	-130.33	-53.13	2.948	1.005	1.509	1129.
108.	.8165	8351.3	24.16	-127.68	-50.11	2.976	1.004	1.508	1120.
110.	.8204	8209.7	23.62	-125.03	-47.10	3.004	1.004	1.507	1110.
112.	.8243	8071.0	23.10	-122.39	-44.08	3.031	1.004	1.507	1101.
114.	.8282	7935.1	22.59	-119.75	-41.07	3.058	1.004	1.507	1091.
116.	.8321	7802.0	22.09	-117.10	-38.05	3.084	1.005	1.507	1082.
118.	.8360	7671.7	21.60	-114.46	-35.04	3.110	1.006	1.508	1072.
120.	.8400	7544.3	21.12	-111.82	-32.02	3.135	1.006	1.507	1063.
122.	.8439	7419.7	20.66	-109.18	-29.01	3.160	1.005	1.505	1054.
124.	.8479	7297.8	20.20	-106.55	-26.00	3.184	1.001	1.500	1046.
126.	.8519	7178.8	19.76	-103.94	-23.01	3.208	.991	1.489	1038.
128.	.8559	7062.4	19.33	-101.35	-20.04	3.232	.973	1.469	1033.
130.	.8600	7009.9	19.08	-99.19	-17.44	3.252	.976	1.476	1030.
132.	.8647	6925.2	18.76	-96.60	-14.45	3.274	.974	1.476	1024.
134.	.8688	6790.0	18.42	-94.03	-11.49	3.297	.970	1.475	1016.
136.	.8735	6800.2	17.98	-91.39	-8.40	3.319	.963	1.456	1014.
138.	.8775	6650.9	17.56	-88.87	-5.51	3.341	.955	1.448	1004.
140.	.8819	6582.1	17.12	-86.33	-2.55	3.362	.946	1.431	998.
142.	.8863	6492.3	16.68	-83.82	.38	3.383	.935	1.413	990.
144.	.8908	6442.0	16.22	-81.31	3.32	3.403	.924	1.390	985.
146.	.8949	6302.6	15.78	-78.91	6.11	3.422	.912	1.374	974.
148.	.8991	6189.0	15.37	-76.53	8.89	3.441	.900	1.357	966.
150.	.9035	6089.5	14.97	-74.16	11.67	3.460	.888	1.338	958.
152.	.9078	5986.4	14.72	-71.84	14.41	3.478	.876	1.330	953.
154.	.9121	5882.1	14.73	-69.54	17.11	3.496	.866	1.338	953.
156.	.9159	5308.4	14.81	-67.30	19.71	3.512	.858	1.399	930.
158.	.9229	6144.7	15.01	-64.62	23.05	3.534	.851	1.344	985.
160.	.9262	5675.6	15.02	-62.38	25.61	3.550	.853	1.398	965.
165.	.9381	5605.4	14.99	-56.27	32.85	3.594	.869	1.451	967.
170.	.9516	5753.2	14.43	-49.87	40.53	3.640	.872	1.428	971.
175.	.9624	5392.1	13.81	-43.92	47.50	3.680	.866	1.439	947.
180.	.9732	5017.9	13.27	-38.04	54.41	3.719	.856	1.454	923.
185.	.9851	4807.6	12.57	-32.13	61.45	3.758	.844	1.434	904.
190.	.9983	4730.4	11.82	-26.19	68.65	3.796	.831	1.390	890.
195.	1.0108	4606.5	11.28	-20.48	75.55	3.832	.819	1.369	878.
200.	1.0244	4553.4	10.98	-14.70	82.62	3.868	.810	1.366	876.
210.	1.0495	4246.9	10.29	-3.58	96.13	3.934	.799	1.376	855.
220.	1.0729	3782.5	9.62	7.15	109.07	3.994	.794	1.414	821.
230.	1.1040	3922.0	8.68	18.50	123.37	4.058	.789	1.328	812.
240.	1.1333	3890.2	8.04	29.31	136.98	4.116	.784	1.296	802.
250.	1.1561	3439.9	7.68	39.36	149.19	4.166	.782	1.355	772.
260.	1.1887	3452.5	7.13	50.22	163.14	4.220	.778	1.319	765.
270.	1.2170	3317.2	6.64	60.45	176.06	4.269	.774	1.305	748.
280.	1.2494	3316.4	6.26	70.82	189.51	4.318	.769	1.285	744.
290.	1.2784	3195.0	5.93	80.77	202.22	4.363	.763	1.286	734.
300.	1.3075	3099.3	5.64	90.58	214.80	4.405	.757	1.284	725.

* TWO-PHASE BOUNDARY

TABLE VIa. THERMODYNAMIC PROPERTIES OF OXYGEN

1000. BAR ISOBAR

TEMPERATURE K	VOLUME CM3/G	ISOTHERM DERIVATIVE BAR-CM3/G	ISOCHORE DERIVATIVE BAR/K	INTERNAL ENERGY J/G	ENTHALPY J/G	ENTROPY J/G-K	Cv J/G-K	Cp J/G-K	VELOCITY OF SOUND M/S
* 65.060	.7343	12120.6	40.58	-187.30	-113.87	2.175	1.152	1.628	1309.
66.	.7360	12036.6	40.07	-185.94	-112.34	2.199	1.147	1.624	1305.
68.	.7396	11858.5	39.03	-183.06	-109.10	2.247	1.139	1.616	1297.
70.	.7432	11681.1	38.03	-180.19	-105.87	2.294	1.130	1.608	1290.
72.	.7468	11504.4	37.08	-177.34	-102.66	2.339	1.121	1.601	1282.
74.	.7504	11328.6	36.16	-174.51	-99.47	2.383	1.112	1.593	1274.
76.	.7540	11153.7	35.28	-171.69	-96.29	2.425	1.104	1.586	1266.
78.	.7576	10980.0	34.44	-168.88	-93.12	2.466	1.095	1.579	1258.
80.	.7612	10807.5	33.62	-166.09	-89.97	2.506	1.087	1.572	1250.
82.	.7648	10636.3	32.83	-163.32	-86.83	2.545	1.079	1.565	1242.
84.	.7684	10466.6	32.07	-160.55	-83.71	2.583	1.071	1.558	1234.
86.	.7721	10298.5	31.33	-157.80	-80.60	2.619	1.064	1.552	1226.
88.	.7757	10132.1	30.61	-155.07	-77.50	2.655	1.056	1.546	1218.
90.	.7793	9967.5	29.91	-152.35	-74.41	2.689	1.049	1.540	1210.
92.	.7830	9804.9	29.23	-149.64	-71.34	2.723	1.043	1.534	1201.
94.	.7867	9644.3	28.57	-146.94	-68.27	2.756	1.036	1.529	1193.
96.	.7903	9485.9	27.93	-144.25	-65.22	2.788	1.031	1.524	1184.
98.	.7940	9329.7	27.31	-141.58	-62.18	2.820	1.026	1.519	1176.
100.	.7977	9175.8	26.70	-138.91	-59.14	2.850	1.021	1.515	1167.
102.	.8014	9024.3	26.10	-136.26	-56.11	2.880	1.017	1.512	1158.
104.	.8051	8875.4	25.53	-133.61	-53.09	2.910	1.014	1.509	1149.
106.	.8089	8729.0	24.96	-130.96	-50.08	2.938	1.012	1.507	1140.
108.	.8126	8585.2	24.41	-128.33	-47.06	2.967	1.011	1.506	1131.
110.	.8164	8444.1	23.87	-125.69	-44.05	2.994	1.010	1.505	1122.
112.	.8202	8305.7	23.35	-123.06	-41.05	3.021	1.010	1.505	1112.
114.	.8239	8170.0	22.83	-120.43	-38.04	3.048	1.011	1.505	1103.
116.	.8277	8037.1	22.33	-117.80	-35.03	3.074	1.012	1.505	1093.
118.	.8316	7906.9	21.84	-115.17	-32.01	3.100	1.013	1.506	1084.
120.	.8354	7779.5	21.36	-112.54	-29.00	3.125	1.014	1.505	1075.
122.	.8392	7654.9	20.90	-109.91	-25.99	3.150	1.013	1.503	1066.
124.	.8431	7533.0	20.44	-107.30	-22.99	3.175	1.009	1.497	1058.
126.	.8469	7413.8	20.00	-104.69	-20.00	3.198	.999	1.487	1050.
128.	.8508	7297.3	19.56	-102.12	-17.04	3.222	.981	1.467	1045.
130.	.8554	7249.2	19.17	-99.97	-14.44	3.242	.984	1.466	1039.
132.	.8594	7168.5	18.87	-97.40	-11.45	3.264	.982	1.466	1035.
134.	.8634	7030.1	18.55	-94.85	-8.51	3.287	.979	1.468	1027.
136.	.8680	7054.8	18.20	-92.20	-5.40	3.310	.972	1.453	1027.
138.	.8719	6900.3	17.79	-89.70	-2.51	3.331	.965	1.446	1017.
140.	.8761	6835.7	17.35	-87.16	.45	3.352	.956	1.430	1011.
142.	.8804	6746.7	16.92	-84.65	3.38	3.373	.947	1.414	1004.
144.	.8848	6700.7	16.46	-82.15	6.34	3.393	.936	1.392	998.
146.	.8887	6556.2	16.02	-79.75	9.12	3.412	.925	1.377	988.
148.	.8928	6440.0	15.57	-77.37	11.90	3.431	.913	1.357	978.
150.	.8970	6338.7	15.16	-75.01	14.69	3.450	.901	1.339	970.
152.	.9012	6233.6	14.76	-72.69	17.42	3.468	.889	1.321	962.
154.	.9052	6127.4	14.38	-70.42	20.11	3.486	.878	1.304	954.
156.	.9080	5193.9	14.26	-68.33	22.47	3.501	.869	1.373	906.
158.	.9162	6511.2	14.71	-65.55	26.06	3.524	.855	1.296	993.
160.	.9188	5905.0	14.84	-63.42	28.46	3.539	.856	1.360	969.
165.	.9305	5873.5	15.10	-57.43	35.62	3.583	.868	1.423	981.
170.	.9440	6110.2	14.80	-51.03	43.37	3.629	.871	1.414	996.
175.	.9541	5706.7	14.30	-45.15	50.26	3.669	.866	1.436	973.
180.	.9641	5271.6	13.71	-39.36	57.05	3.707	.856	1.453	946.
185.	.9753	5042.4	13.13	-33.49	64.04	3.745	.846	1.448	929.
190.	.9881	4974.1	12.31	-27.52	71.29	3.784	.834	1.400	913.
195.	1.0001	4851.0	11.65	-21.82	78.19	3.820	.823	1.369	898.
200.	1.0133	4810.9	11.15	-16.08	85.25	3.856	.813	1.344	892.
210.	1.0370	4481.9	10.58	-5.09	98.61	3.921	.801	1.365	874.
220.	1.0582	3935.3	10.02	5.43	111.25	3.980	.796	1.425	839.
230.	1.0891	4164.2	9.09	16.90	125.81	4.045	.792	1.334	837.
240.	1.1176	4171.4	8.22	27.76	139.52	4.103	.788	1.273	821.
250.	1.1375	3628.5	7.91	37.57	151.32	4.151	.785	1.343	788.
260.	1.1691	3659.8	7.43	48.42	165.33	4.206	.781	1.318	786.
270.	1.1957	3511.7	6.94	58.62	178.19	4.255	.778	1.307	768.
280.	1.2270	3524.4	6.46	69.00	191.70	4.304	.777	1.271	762.
290.	1.2540	3386.8	6.16	78.87	204.27	4.348	.767	1.278	751.
300.	1.2813	3281.6	5.87	88.61	216.74	4.390	.760	1.277	742.

* TWO-PHASE BOUNDARY

TABLE Vb. THERMODYNAMIC PROPERTIES OF OXYGEN ON THE SATURATION BOUNDARIES

TEMPERATURE	PRESSURE	VOLUME	ISOTHERM DERIVATIVE	ISOCHORE DERIVATIVE	INTERNAL ENERGY	ENTHALPY	ENTROPY	C_V	C_P	VELOCITY OF SOUND
DEG. R	PSIA	FT^3/LB	FT^3-PSIA/LB	PSIA/R	BTU/LB	BTU/LB	BTU/LB-R	BTU/LB-R	BTU/LB-R	FT/S
97.846	.021	.01226	2020.79	320.06	-83.211	-83.211	.50119	.260	.398	3786.
97.846	.021	1544.928	32.76		15.062	21.136	1.56740	.155	.217	463.
100.	.031	.01231	1986.17	313.15	-82.351	-82.351	.51004	.259	.398	3757.
100.	.031	1092.719	33.46		15.393	21.601	1.54923	.155	.217	466.
102.	.042	.01236	1954.11	307.01	-81.559	-81.555	.51792	.259	.398	3730.
102.	.042	803.617	34.15		15.703	22.035	1.53322	.155	.217	472.
104.	.058	.01240	1922.05	301.12	-80.764	-80.764	.52557	.258	.398	3704.
104.	.058	598.723	34.85		16.012	22.470	1.51792	.155	.218	476.
106.	.079	.01245	1890.22	295.46	-79.968	-79.968	.53322	.257	.398	3681.
106.	.079	451.576	35.55		16.322	22.900	1.50334	.155	.218	479.
108.	.105	.01250	1858.62	290.00	-79.172	-79.172	.54063	.256	.398	3655.
108.	.105	344.567	36.24		16.632	23.335	1.48948	.155	.218	486.
110.	.139	.01255	1827.02	284.72	-78.376	-78.376	.54780	.255	.398	3632.
110.	.139	265.816	36.94		16.942	23.765	1.47634	.155	.218	489.
112.	.181	.01260	1795.43	279.62	-77.580	-77.580	.55497	.255	.398	3606.
112.	.181	207.202	37.40		17.247	24.195	1.46367	.155	.218	492.
114.	.234	.01265	1764.06	274.66	-76.784	-76.784	.56214	.253	.398	3583.
114.	.234	163.106	38.10		17.557	24.625	1.45148	.156	.218	499.
116.	.300	.01270	1732.70	269.84	-75.988	-75.988	.56907	.252	.398	3560.
116.	.300	129.594	38.80		17.862	25.055	1.43977	.156	.218	502.
118.	.380	.01275	1701.57	265.15	-75.192	-75.192	.57576	.251	.398	3533.
118.	.380	103.877	39.50		18.168	25.481	1.42877	.156	.218	505.
120.	.478	.01280	1670.44	260.58	-74.396	-74.396	.58246	.250	.398	3510.
120.	.478	83.960	39.96		18.473	25.907	1.41826	.156	.218	512.
122.	.596	.01285	1639.30	256.12	-73.601	-73.601	.58915	.249	.398	3487.
122.	.596	68.400	40.66		18.774	26.329	1.40798	.156	.218	515.
124.	.738	.01290	1608.40	251.75	-72.805	-72.800	.59560	.248	.398	3461.
124.	.738	56.142	41.35	.01	19.080	26.755	1.39818	.156	.218	518.
126.	.907	.01296	1577.50	247.48	-72.009	-72.004	.60182	.246	.398	3438.
126.	.907	46.409	41.82	.01	19.381	27.172	1.38886	.156	.219	522.
128.	1.106	.01301	1546.84	243.29	-71.209	-71.209	.60827	.245	.399	3415.
128.	1.106	38.623	42.52	.01	19.678	27.594	1.37978	.156	.219	525.
130.	1.340	.01306	1516.17	239.18	-70.413	-70.408	.61424	.244	.399	3389.
130.	1.340	32.349	43.21	.01	19.979	28.007	1.37117	.156	.219	531.
132.	1.614	.01312	1485.73	235.14	-69.617	-69.612	.62046	.242	.399	3366.
132.	1.614	27.260	43.68	.01	20.276	28.420	1.36281	.156	.219	535.
134.	1.931	.01317	1455.53	231.18	-68.817	-68.812	.62643	.241	.399	3340.
134.	1.931	23.103	44.37	.01	20.568	28.833	1.35492	.156	.220	538.
136.	2.297	.01323	1425.33	227.27	-68.021	-68.012	.63241	.240	.399	3317.
136.	2.297	19.688	44.84	.02	20.865	29.237	1.34727	.156	.220	541.
138.	2.718	.01328	1395.13	223.42	-67.220	-67.212	.63814	.238	.400	3294.
138.	2.718	16.866	45.30	.02	21.153	29.642	1.33986	.156	.220	545.
140.	3.199	.01334	1365.16	219.63	-66.420	-66.412	.64388	.237	.400	3268.
140.	3.199	14.519	46.00	.02	21.442	30.046	1.33269	.156	.221	548.
142.	3.746	.01340	1335.42	215.89	-65.620	-65.611	.64962	.235	.400	3241.
142.	3.746	12.558	46.47	.03	21.730	30.442	1.32576	.156	.221	551.
144.	4.366	.01346	1305.68	212.19	-64.820	-64.811	.65511	.234	.401	3218.
144.	4.366	10.911	46.93	.03	22.014	30.833	1.31907	.157	.222	554.
146.	5.065	.01352	1276.41	208.55	-64.020	-64.007	.66085	.233	.401	3192.
146.	5.065	9.52057	47.39	.04	22.294	31.225	1.31286	.157	.223	558.
148.	5.850	.01358	1247.13	204.94	-63.215	-63.202	.66611	.231	.401	3166.
148.	5.850	8.34097	47.86	.04	22.569	31.608	1.30664	.157	.223	561.
150.	6.729	.01364	1217.86	201.37	-62.415	-62.398	.67161	.230	.402	3140.
150.	6.729	7.33582	48.32	.05	22.844	31.986	1.30067	.157	.224	564.
152.	7.709	.01370	1189.05	197.84	-61.611	-61.593	.67686	.228	.402	3113.
152.	7.709	6.47578	48.79	.05	23.115	32.360	1.29469	.157	.224	568.
154.	8.797	.01376	1160.24	194.35	-60.806	-60.785	.68212	.227	.403	3087.
154.	8.797	5.73653	49.25	.06	23.386	32.730	1.28920	.158	.225	571.
156.	10.003	.01383	1131.67	190.88	-60.002	-59.976	.68738	.226	.403	3061.
156.	10.003	5.09884	49.72	.07	23.649	33.092	1.28370	.158	.226	574.
158.	11.334	.01389	1103.56	187.45	-59.197	-59.167	.69240	.224	.404	3035.
158.	11.334	4.54668	49.95	.08	23.911	33.453	1.27844	.158	.227	577.

TABLE Vb. THERMODYNAMIC PROPERTIES OF OXYGEN ON THE SATURATION BOUNDARIES

TEMPERATURE	PRESSURE	VOLUME	ISOTHERM OERIVATIVE	ISOCHORE OERIVATIVE	INTERNAL ENERGY	ENTHALPY	ENTROPY	C_V	C_p	VELOCITY OF SOUNO
OEG. R	PSIA	FT^3/LB	FT^3-PSIA/LB	PSIA/R	BTU/LB	BTU/LB	BTU/LB-R	BTU/LB-R	BTU/LB-R	FT/S
160.	12.798	.01396	1075.44	184.05	-58.388	-58.354	.69766	.223	.405	3008.
160.	12.798	4.06661	50.42	.08	24.165	33.802	1.27342	.158	.228	581.
162.	14.405	.01402	1047.57	180.67	-57.579	-57.545	.70268	.222	.405	2979.
162.	14.405	3.64788	50.65	.09	24.419	34.150	1.26840	.158	.229	584.
164.	16.164	.01409	1019.92	177.33	-56.771	-56.728	.70746	.220	.406	2953.
164.	16.164	3.28138	51.11	.11	24.664	34.486	1.26362	.159	.230	584.
166.	18.083	.01416	992.50	174.00	-55.962	-55.915	.71248	.219	.407	2923.
166.	18.083	2.95957	51.34	.12	24.909	34.821	1.25884	.159	.231	587.
168.	20.173	.01423	965.55	170.70	-55.149	-55.097	.71726	.217	.408	2897.
168.	20.173	2.67604	51.58	.13	25.150	35.144	1.25430	.160	.233	591.
170.	22.443	.01430	938.60	167.43	-54.336	-54.275	.72204	.216	.408	2867.
170.	22.443	2.42568	51.81	.14	25.382	35.462	1.24976	.160	.234	594.
172.	24.902	.01437	912.12	164.17	-53.518	-53.454	.72682	.215	.409	2838.
172.	24.902	2.20366	52.04	.16	25.610	35.772	1.24546	.160	.235	594.
174.	27.560	.01445	885.87	160.94	-52.705	-52.632	.73160	.214	.410	2808.
174.	27.560	2.00663	52.27	.17	25.834	36.073	1.24116	.161	.237	597.
176.	30.428	.01453	859.84	157.73	-51.888	-51.806	.73638	.212	.412	2776.
176.	30.428	1.83091	52.27	.19	26.054	36.370	1.23709	.161	.239	600.
178.	33.516	.01460	834.06	154.54	-51.066	-50.976	.74092	.212	.413	2746.
178.	33.516	1.67409	52.51	.21	26.264	36.654	1.23303	.162	.240	600.
180.	36.834	.01468	808.73	151.37	-50.244	-50.145	.74546	.210	.414	2717.
180.	36.834	1.53361	52.51	.23	26.471	36.929	1.22920	.162	.242	604.
182.	40.392	.01476	783.64	148.23	-49.418	-49.311	.75000	.209	.415	2684.
182.	40.392	1.40754	52.74	.25	26.673	37.200	1.22514	.163	.245	604.
184.	44.201	.01485	759.01	145.10	-48.592	-48.472	.75454	.208	.417	2651.
184.	44.201	1.29413	52.74	.28	26.867	37.458	1.22156	.163	.247	607.
186.	48.272	.01493	734.62	141.99	-47.766	-47.633	.75908	.207	.418	2618.
186.	48.272	1.19177	52.74	.30	27.052	37.708	1.21773	.164	.249	610.
188.	52.616	.01502	710.69	138.91	-46.936	-46.790	.76362	.207	.420	2585.
188.	52.616	1.09935	52.74	.33	27.237	37.945	1.21415	.165	.251	610.
190.	57.243	.01510	686.99	135.85	-46.101	-45.942	.76792	.206	.421	2552.
190.	57.243	1.01573	52.51	.36	27.409	38.177	1.21056	.165	.254	610.
192.	62.164	.01519	663.76	132.81	-45.267	-45.090	.77223	.205	.423	2520.
192.	62.164	.93980	52.51	.39	27.577	38.396	1.20698	.166	.256	614.
194.	67.390	.01528	640.76	129.79	-44.428	-44.239	.77677	.205	.425	2484.
194.	67.390	.87076	52.27	.42	27.736	38.603	1.20363	.167	.259	614.
196.	72.933	.01538	618.22	126.80	-43.589	-43.378	.78107	.204	.427	2451.
196.	72.933	.80797	52.04	.46	27.891	38.801	1.20029	.167	.262	617.
198.	78.803	.01547	596.15	123.84	-42.741	-42.518	.78537	.203	.429	2415.
198.	78.803	.75063	52.04	.49	28.037	38.990	1.19694	.168	.266	617.
200.	85.012	.01557	574.31	120.90	-41.894	-41.649	.78967	.203	.432	2379.
200.	85.012	.69824	51.58	.54	28.175	39.166	1.19359	.169	.269	617.
202.	91.571	.01567	552.94	118.00	-41.042	-40.775	.79374	.203	.434	2342.
202.	91.571	.65019	51.34	.58	28.304	39.326	1.19025	.170	.273	617.
204.	98.492	.01578	532.03	115.12	-40.186	-39.902	.79804	.203	.437	2306.
204.	98.492	.60614	51.11	.62	28.424	39.480	1.18714	.171	.277	620.
206.	105.785	.01588	511.35	112.29	-39.330	-39.016	.80234	.202	.440	2267.
206.	105.785	.56577	50.65	.67	28.536	39.618	1.18379	.172	.281	620.
208.	113.463	.01599	491.37	109.49	-38.465	-38.130	.80640	.202	.443	2231.
208.	113.463	.52845	50.18	.72	28.639	39.743	1.18069	.173	.285	620.
210.	121.537	.01610	471.63	106.73	-37.596	-37.235	.81071	.202	.446	2195.
210.	121.537	.49417	49.95	.78	28.734	39.855	1.17758	.174	.289	620.
212.	130.019	.01622	452.11	104.01	-36.723	-36.331	.81477	.202	.449	2155.
212.	130.019	.46261	49.25	.84	28.820	39.954	1.17447	.175	.294	620.
214.	138.921	.01633	433.29	101.34	-35.845	-35.424	.81883	.202	.453	2119.
214.	138.921	.43330	48.79	.90	28.893	40.040	1.17137	.176	.300	620.
216.	148.254	.01645	414.70	98.72	-34.963	-34.512	.82290	.203	.457	2083.
216.	148.254	.40623	48.32	.97	28.958	40.109	1.16850	.177	.305	620.
218.	158.030	.01658	396.58	96.16	-34.073	-33.587	.82720	.203	.461	2044.
218.	158.030	.38108	47.63	1.04	29.013	40.165	1.16539	.178	.311	620.
220.	168.261	.01671	378.93	93.66	-33.178	-32.657	.83126	.203	.466	2008.
220.	168.261	.35785	46.93	1.12	29.056	40.203	1.16228	.179	.317	620.

TABLE Vb. THERMODYNAMIC PROPERTIES OF OXYGEN ON THE SATURATION BOUNDARIES

TEMPERATURE	PRESSURE	VOLUME	ISOTHERM DERIVATIVE	ISOCHORE DERIVATIVE	INTERNAL ENERGY	ENTHALPY	ENTROPY	Cv	Cp	VELOCITY OF SOUND
DEG. R	PSIA	FT^3/LB	FT^3-PSIA/LB	PSIA/R	BTU/LB	BTU/LB	BTU/LB-R	BTU/LB-R	BTU/LB-R	FT/S
222.	178.960	.01684	361.50	91.22	-32.274	-31.715	.83532	.203	.471	1972.
222.	178.960	.33623	46.23	1.20	29.087	40.225	1.15942	.180	.324	620.
224.	190.139	.01698	344.54	88.85	-31.367	-30.769	.83939	.202	.476	1939.
224.	190.139	.31604	45.54	1.28	29.104	40.233	1.15631	.181	.331	620.
226.	201.810	.01712	327.81	86.56	-30.446	-29.809	.84346	.202	.482	1906.
226.	201.810	.29730	44.84	1.37	29.112	40.220	1.15344	.183	.339	620.
228.	213.986	.01726	311.32	84.35	-29.521	-28.837	.84751	.201	.489	1873.
228.	213.986	.27968	43.91	1.47	29.104	40.190	1.15038	.184	.347	620.
230.	226.680	.01742	295.29	82.22	-28.588	-27.856	.85182	.200	.495	1844.
230.	226.680	.26334	42.98	1.58	29.087	40.139	1.14747	.185	.356	620.
232.	239.903	.01758	283.90	79.72	-27.650	-26.871	.85588	.200	.497	1808.
232.	239.903	.24797	42.05	1.69	29.048	40.070	1.14436	.187	.366	617.
234.	253.671	.01775	267.41	78.34	-26.686	-25.856	.85994	.199	.512	1785.
234.	253.671	.23371	41.12	1.81	29.001	39.975	1.14125	.188	.377	617.
236.	267.995	.01792	251.15	76.35	-25.709	-24.819	.86424	.198	.524	1755.
236.	267.995	.22025	39.96	1.94	28.932	39.859	1.13838	.190	.388	617.
238.	282.890	.01810	234.65	73.66	-24.720	-23.773	.86831	.197	.531	1713.
238.	282.890	.20760	38.80	2.07	28.846	39.721	1.13528	.191	.401	614.
240.	298.370	.01829	218.62	71.03	-23.722	-22.711	.87261	.197	.540	1667.
240.	298.370	.19575	37.64	2.22	28.742	39.558	1.13217	.193	.415	614.
242.	314.448	.01850	202.82	68.45	-22.711	-21.635	.87691	.196	.550	1624.
242.	314.448	.18453	36.48	2.38	28.618	39.364	1.12906	.195	.431	610.
244.	331.139	.01871	187.02	65.94	-21.687	-20.538	.88121	.196	.564	1578.
244.	331.139	.17396	35.08	2.54	28.476	39.141	1.12572	.196	.448	610.
246.	348.459	.01894	171.46	63.49	-20.646	-19.424	.88552	.197	.581	1532.
246.	348.459	.16403	33.92	2.73	28.304	38.887	1.12261	.198	.467	607.
248.	366.424	.01917	157.05	61.16	-19.588	-18.288	.88982	.197	.599	1489.
248.	366.424	.15458	32.53	2.92	28.110	38.599	1.11926	.200	.489	607.
250.	385.048	.01943	142.42	58.70	-18.508	-17.122	.89412	.197	.619	1440.
250.	385.048	.14561	30.90	3.14	27.886	38.272	1.11566	.202	.514	604.
252.	404.350	.01970	127.55	56.16	-17.411	-15.935	.89865	.197	.645	1391.
252.	404.350	.13712	29.51	3.37	27.532	37.902	1.11238	.204	.543	600.
254.	424.346	.01999	114.31	53.58	-16.292	-14.718	.90320	.198	.670	1339.
254.	424.346	.12911	27.65	3.62	27.340	37.484	1.10875	.206	.576	600.
256.	445.056	.02031	101.76	51.08	-15.143	-13.470	.90774	.199	.701	1286.
256.	445.056	.12142	26.02	3.90	27.013	37.015	1.10492	.209	.616	597.
258.	466.499	.02065	89.21	48.58	-13.965	-12.179	.91252	.201	.739	1234.
258.	466.499	.11405	24.16	4.20	26.634	36.491	1.10110	.211	.664	594.
260.	488.696	.02102	77.13	46.09	-12.747	-10.846	.91730	.202	.789	1181.
260.	488.696	.10700	22.30	4.54	26.204	35.888	1.09703	.214	.722	591.
262.	511.670	.02143	66.21	43.63	-11.487	-9.460	.92232	.205	.846	1125.
262.	511.670	.10028	20.44	4.92	25.714	35.208	1.09273	.217	.796	587.
264.	535.446	.02189	55.76	41.18	-10.174	-8.006	.92734	.207	.919	1073.
264.	535.446	.09371	18.35	5.35	25.146	34.430	1.08819	.220	.892	587.
266.	560.051	.02241	46.00	38.70	-8.794	-6.470	.93284	.210	1.016	1017.
266.	560.051	.08730	16.03	5.84	24.479	33.526	1.08317	.223	1.023	584.
268.	585.516	.02301	36.48	36.10	-7.331	-4.836	.93857	.213	1.154	955.
268.	585.516	.08089	13.48	6.42	23.687	32.459	1.07768	.227	1.212	581.
270.	611.878	.02372	27.88	33.48	-5.756	-3.067	.94479	.217	1.345	896.
270.	611.878	.07465	10.92	7.11	22.719	31.169	1.07146	.232	1.515	577.
272.	639.181	.02459	19.52	30.69	-4.014	-1.106	.95148	.222	1.689	830.
272.	639.181	.06840	9.76	7.94	21.562	29.654	1.06453	.238	1.767	577.
274.	667.482	.02574	12.55	27.62	-2.018	1.162	.95937	.228	2.288	761.
274.	667.482	.06183	5.34	8.99	20.052	27.697	1.05617	.246	3.193	568.
276.	696.865	.02746	5.58	24.08	.490	4.035	.96917	.239	4.287	676.
276.	696.865	.05446	1.39	10.49	17.862	24.896	1.04498	.256	12.446	554.
278.	727.505	.03188		18.71	5.180	9.473	.98829	.268		558.
278.	727.505	.04325		13.61	12.958	18.783	1.02175	.275		541.
278.246	731.387	.03673		15.94	8.953	13.926	1.00430			
278.246	731.387	.03668		15.94	8.953	13.926	1.00430			

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

1. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	Cv BTU/LB-R	Cp BTU/LB-R	VELOCITY OF SOUND FT/S
* 97.848	.01226	2020.94	320.06	-83.210	-83.207	.50129	.260	.398	3786.
100.	.01231	1986.27	313.15	-82.353	-82.351	.50994	.259	.398	3757.
105.	.01243	1906.32	298.27	-80.364	-80.362	.52935	.258	.398	3693.
110.	.01255	1827.06	284.73	-78.376	-78.373	.54786	.255	.398	3631.
115.	.01268	1748.42	272.24	-76.386	-76.384	.56554	.253	.398	3570.
120.	.01280	1670.39	260.58	-74.397	-74.394	.58248	.250	.398	3510.
125.	.01293	1592.98	249.61	-72.405	-72.403	.59873	.247	.398	3450.
* 126.975	.01298	1562.58	245.43	-71.618	-71.616	.60498	.246	.399	3426.
* 126.975	42.39976	42.21	.008	19.526	27.378	1.38440	.156	.219	524.
130.	43.42205	43.24	.008	19.999	28.039	1.38955	.156	.219	531.
135.	45.11079	44.94	.007	20.779	29.133	1.39780	.156	.219	541.
140.	46.79838	46.64	.007	21.560	30.225	1.40575	.156	.218	551.
145.	48.48495	48.34	.007	22.339	31.318	1.41341	.156	.218	561.
150.	50.17064	50.03	.007	23.119	32.409	1.42082	.156	.218	570.
155.	51.85555	51.73	.006	23.898	33.501	1.42797	.156	.218	580.
160.	53.53978	53.42	.006	24.677	34.592	1.43490	.156	.218	589.
165.	55.22340	55.11	.006	25.456	35.682	1.44161	.156	.218	598.
170.	56.90648	56.80	.006	26.235	36.772	1.44812	.156	.218	607.
175.	58.58907	58.49	.006	27.013	37.863	1.45444	.155	.218	616.
180.	60.27124	60.17	.006	27.792	38.952	1.46058	.155	.218	625.
185.	61.95302	61.86	.005	28.570	40.042	1.46655	.155	.218	634.
190.	63.63444	63.55	.005	29.348	41.132	1.47236	.155	.218	642.
195.	65.31555	65.23	.005	30.126	42.221	1.47802	.155	.218	651.
200.	66.99638	66.92	.005	30.904	43.310	1.48354	.155	.218	659.
205.	68.67694	68.60	.005	31.682	44.399	1.48892	.155	.218	667.
210.	70.35727	70.28	.005	32.460	45.488	1.49416	.155	.218	675.
215.	72.03738	71.97	.005	33.238	46.577	1.49929	.155	.218	683.
220.	73.71730	73.65	.005	34.015	47.666	1.50429	.155	.218	691.
225.	75.39703	75.33	.004	34.793	48.754	1.50919	.155	.218	699.
230.	77.07660	77.01	.004	35.570	49.843	1.51397	.155	.218	707.
235.	78.75601	78.70	.004	36.348	50.931	1.51865	.155	.218	715.
240.	80.43529	80.38	.004	37.125	52.020	1.52324	.155	.218	722.
245.	82.11443	82.06	.004	37.903	53.108	1.52772	.155	.218	730.
250.	83.79345	83.74	.004	38.680	54.196	1.53212	.155	.218	737.
255.	85.47237	85.42	.004	39.457	55.285	1.53643	.155	.218	744.
260.	87.15118	87.10	.004	40.235	56.373	1.54066	.155	.218	752.
265.	88.82989	88.78	.004	41.012	57.461	1.54480	.155	.218	759.
270.	90.50852	90.46	.004	41.789	58.549	1.54887	.155	.218	766.
275.	92.18706	92.14	.004	42.567	59.637	1.55286	.155	.218	773.
280.	93.86552	93.82	.004	43.344	60.725	1.55678	.155	.218	780.
285.	95.54391	95.50	.004	44.121	61.813	1.56064	.155	.218	787.
290.	97.22224	97.18	.003	44.898	62.901	1.56442	.155	.218	794.
295.	98.90050	98.86	.003	45.675	63.989	1.56814	.155	.218	801.
300.	100.57870	100.54	.003	46.453	65.077	1.57180	.155	.218	808.
310.	103.93495	103.90	.003	48.007	67.253	1.57893	.155	.218	821.
320.	107.29099	107.26	.003	49.561	69.429	1.58584	.155	.218	834.
330.	110.64687	110.62	.003	51.116	71.605	1.59253	.155	.218	847.
340.	114.00259	113.97	.003	52.670	73.781	1.59903	.155	.218	860.
350.	117.35817	117.33	.003	54.225	75.957	1.60534	.155	.218	872.
360.	120.71362	120.69	.003	55.780	78.133	1.61147	.155	.218	885.
370.	124.06897	124.05	.003	57.335	80.309	1.61743	.156	.218	897.
380.	127.42422	127.40	.003	58.891	82.486	1.62324	.156	.218	909.
390.	130.77938	130.76	.003	60.446	84.663	1.62889	.156	.218	921.
400.	134.13445	134.11	.003	62.003	86.841	1.63440	.156	.218	932.
410.	137.48945	137.47	.002	63.559	89.019	1.63978	.156	.218	944.
420.	140.84438	140.83	.002	65.117	91.198	1.64503	.156	.218	955.
430.	144.19925	144.18	.002	66.675	93.377	1.65016	.156	.218	967.
440.	147.55407	147.54	.002	68.234	95.557	1.65517	.156	.218	978.
450.	150.90883	150.89	.002	69.794	97.738	1.66007	.156	.218	989.
460.	154.26355	154.25	.002	71.355	99.920	1.66487	.156	.218	1000.
470.	157.61822	157.61	.002	72.917	102.103	1.66956	.156	.218	1010.
480.	160.97285	160.96	.002	74.480	104.288	1.67416	.156	.218	1021.
490.	164.32744	164.32	.002	76.044	106.473	1.67867	.157	.219	1031.
500.	167.68200	167.67	.002	77.610	108.660	1.68309	.157	.219	1042.
510.	171.03652	171.03	.002	79.178	110.849	1.68742	.157	.219	1052.
520.	174.39102	174.38	.002	80.747	113.039	1.69168	.157	.219	1062.
530.	177.74548	177.74	.002	82.318	115.232	1.69585	.157	.219	1072.
540.	181.09993	181.09	.002	83.891	117.426	1.69995	.157	.220	1082.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

5. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT3/LB	ISOTHERM DERIVATIVE FT3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 97.853	.01226	2021.17	320.06	-83.209	-83.198	.50129	.260	.398	3736.
100.	.01231	1986.60	313.17	-82.355	-82.344	.50993	.259	.398	3758.
105.	.01243	1906.66	298.29	-80.366	-80.355	.52933	.258	.398	3693.
110.	.01255	1827.41	284.75	-78.378	-78.366	.54784	.255	.398	3631.
115.	.01267	1748.78	272.26	-76.389	-76.377	.56552	.253	.398	3570.
120.	.01280	1670.76	260.60	-74.399	-74.387	.58246	.250	.398	3510.
125.	.01293	1593.36	249.63	-72.408	-72.396	.59871	.247	.398	3450.
130.	.01306	1516.62	239.20	-70.415	-70.403	.61434	.244	.399	3390.
135.	.01320	1440.60	229.23	-68.420	-68.408	.62940	.240	.399	3329.
140.	.01334	1365.39	219.64	-66.422	-66.410	.64394	.237	.400	3268.
145.	.01349	1291.07	210.37	-64.420	-64.408	.65799	.233	.401	3205.
* 145.823	.01351	1278.93	208.87	-64.090	-64.078	.66026	.233	.401	3194.
* 145.823	9.63446	47.44	.035	22.268	31.189	1.31332	.157	.222	558.
150.	9.92229	48.91	.034	22.930	32.117	1.31960	.157	.222	567.
155.	10.26604	50.67	.033	23.720	33.225	1.32687	.156	.222	577.
160.	10.60903	52.43	.032	24.509	34.332	1.33390	.156	.221	586.
165.	10.95136	54.17	.031	25.298	35.437	1.34070	.156	.221	596.
170.	11.29309	55.91	.030	26.085	36.541	1.34729	.156	.221	605.
175.	11.63431	57.65	.029	26.871	37.643	1.35368	.156	.220	614.
180.	11.97507	59.38	.028	27.656	38.744	1.35988	.156	.220	623.
185.	12.31541	61.11	.027	28.441	39.844	1.36591	.156	.220	632.
190.	12.65539	62.83	.027	29.225	40.943	1.37177	.156	.220	640.
195.	12.99504	64.55	.026	30.009	42.041	1.37747	.156	.220	649.
200.	13.33438	66.27	.025	30.792	43.138	1.38303	.156	.219	657.
205.	13.67346	67.98	.025	31.575	44.235	1.38844	.156	.219	666.
210.	14.01229	69.69	.024	32.357	45.331	1.39373	.156	.219	674.
215.	14.35090	71.40	.023	33.139	46.426	1.39888	.156	.219	682.
220.	14.68931	73.11	.023	33.921	47.521	1.40391	.156	.219	690.
225.	15.02753	74.81	.022	34.702	48.615	1.40883	.156	.219	698.
230.	15.36558	76.52	.022	35.483	49.709	1.41364	.156	.219	706.
235.	15.70347	78.22	.021	36.264	50.803	1.41835	.156	.219	713.
240.	16.04122	79.92	.021	37.044	51.896	1.42295	.156	.219	721.
245.	16.37884	81.62	.021	37.824	52.989	1.42746	.156	.219	729.
250.	16.71634	83.32	.020	38.604	54.081	1.43187	.156	.218	736.
255.	17.05372	85.01	.020	39.384	55.174	1.43620	.156	.218	744.
260.	17.39100	86.71	.019	40.164	56.266	1.44044	.156	.218	751.
265.	17.72819	88.40	.019	40.944	57.357	1.44460	.156	.218	758.
270.	18.06528	90.10	.019	41.723	58.449	1.44868	.156	.218	765.
275.	18.40229	91.79	.018	42.502	59.540	1.45268	.156	.218	772.
280.	18.73922	93.48	.018	43.281	60.631	1.45661	.156	.218	779.
285.	19.07607	95.18	.018	44.060	61.722	1.46048	.156	.218	786.
290.	19.41286	96.87	.017	44.839	62.813	1.46427	.156	.218	793.
295.	19.74959	98.56	.017	45.618	63.904	1.46800	.156	.218	800.
300.	20.08626	100.25	.017	46.397	64.994	1.47166	.156	.218	807.
310.	20.75943	103.62	.016	47.954	67.175	1.47881	.156	.218	820.
320.	21.43240	107.00	.016	49.511	69.355	1.48573	.156	.218	834.
330.	22.10519	110.37	.015	51.068	71.535	1.49244	.156	.218	847.
340.	22.77784	113.75	.015	52.625	73.714	1.49895	.156	.218	859.
350.	23.45034	117.12	.014	54.182	75.894	1.50527	.156	.218	872.
360.	24.12272	120.49	.014	55.739	78.073	1.51141	.156	.218	884.
370.	24.79499	123.86	.014	57.295	80.252	1.51738	.156	.218	897.
380.	25.46716	127.23	.013	58.853	82.432	1.52319	.156	.218	909.
390.	26.13923	130.59	.013	60.410	84.611	1.52885	.156	.218	921.
400.	26.81123	133.96	.013	61.968	86.791	1.53437	.156	.218	932.
410.	27.48315	137.32	.012	63.526	88.971	1.53975	.156	.218	944.
420.	28.15500	140.69	.012	65.084	91.152	1.54501	.156	.218	955.
430.	28.82679	144.05	.012	66.643	93.333	1.55014	.156	.218	966.
440.	29.49853	147.42	.011	68.203	95.515	1.55516	.156	.218	978.
450.	30.17021	150.78	.011	69.764	97.698	1.56006	.156	.218	989.
460.	30.84185	154.14	.011	71.326	99.881	1.56486	.156	.218	999.
470.	31.51344	157.50	.011	72.889	102.066	1.56956	.156	.219	1010.
480.	32.18499	160.86	.010	74.453	104.252	1.57416	.156	.219	1021.
490.	32.85650	164.23	.010	76.018	106.439	1.57867	.157	.219	1031.
500.	33.52797	167.59	.010	77.585	108.627	1.58309	.157	.219	1042.
510.	34.19942	170.95	.010	79.153	110.817	1.58743	.157	.219	1052.
520.	34.87083	174.31	.010	80.723	113.008	1.59168	.157	.219	1062.
530.	35.54222	177.67	.009	82.294	115.202	1.59586	.157	.219	1072.
540.	36.21358	181.03	.009	83.868	117.397	1.59996	.157	.220	1082.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

10. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	Cv BTU/LB-R	Cp BTU/LB-R	VELOCITY OF SOUND FT/S
* 97.860	.01226	2021.46	320.06	-83.208	-83.186	.50130	.260	.398	3786.
100.	.01231	1987.02	313.20	-82.357	-82.335	.50990	.259	.398	3758.
105.	.01243	1907.08	298.32	-80.369	-80.346	.52931	.258	.398	3694.
110.	.01255	1827.84	284.77	-78.380	-78.357	.54781	.255	.398	3631.
115.	.01267	1749.23	272.28	-76.391	-76.368	.56550	.253	.398	3571.
120.	.01280	1671.22	260.63	-74.402	-74.378	.58243	.250	.398	3511.
125.	.01293	1593.83	249.65	-72.411	-72.387	.59869	.247	.398	3451.
130.	.01306	1517.10	239.23	-70.418	-70.394	.61432	.244	.399	3391.
135.	.01320	1441.10	229.26	-68.424	-68.399	.62938	.240	.399	3330.
140.	.01334	1365.90	219.67	-66.426	-66.401	.64391	.237	.400	3268.
145.	.01349	1291.60	210.40	-64.424	-64.399	.65796	.233	.401	3205.
150.	.01364	1218.29	201.39	-62.418	-62.392	.67156	.230	.402	3141.
155.	.01379	1146.07	192.61	-60.405	-60.380	.68476	.226	.403	3075.
* 155.995	.01383	1131.84	190.89	-60.004	-59.978	.68734	.226	.403	3062.
* 155.995	5.10030	49.68	.067	23.648	33.093	1.28375	.158	.226	574.
160.	5.24096	51.15	.065	24.292	33.997	1.28947	.158	.225	582.
165.	5.41592	52.97	.063	25.093	35.122	1.29640	.157	.225	592.
170.	5.59023	54.78	.061	25.891	36.243	1.30309	.157	.224	601.
175.	5.76397	56.58	.059	26.688	37.361	1.30958	.157	.223	611.
180.	5.93720	58.37	.057	27.483	38.477	1.31586	.157	.223	620.
185.	6.11000	60.15	.056	28.277	39.591	1.32197	.157	.222	629.
190.	6.28240	61.92	.054	29.069	40.702	1.32789	.157	.222	638.
195.	6.45445	63.69	.053	29.860	41.812	1.33366	.157	.222	647.
200.	6.62619	65.45	.051	30.650	42.920	1.33927	.156	.221	655.
205.	6.79764	67.20	.050	31.439	44.026	1.34473	.156	.221	664.
210.	6.96884	68.95	.049	32.227	45.131	1.35006	.156	.221	672.
215.	7.13980	70.69	.047	33.014	46.235	1.35525	.156	.221	680.
220.	7.31056	72.43	.046	33.801	47.338	1.36032	.156	.220	688.
225.	7.48112	74.16	.045	34.587	48.440	1.36528	.156	.220	696.
230.	7.65151	75.89	.044	35.372	49.541	1.37012	.156	.220	704.
235.	7.82174	77.62	.043	36.157	50.641	1.37485	.156	.220	712.
240.	7.99182	79.34	.042	36.942	51.740	1.37948	.156	.220	720.
245.	8.16176	81.07	.041	37.726	52.839	1.38401	.156	.220	727.
250.	8.33158	82.79	.040	38.509	53.937	1.38844	.156	.220	735.
255.	8.50129	84.50	.040	39.292	55.034	1.39279	.156	.219	742.
260.	8.67089	86.22	.039	40.075	56.131	1.39705	.156	.219	750.
265.	8.84039	87.93	.038	40.857	57.227	1.40123	.156	.219	757.
270.	9.00980	89.64	.037	41.640	58.323	1.40532	.156	.219	764.
275.	9.17913	91.35	.037	42.421	59.419	1.40934	.156	.219	771.
280.	9.34837	93.06	.036	43.203	60.514	1.41329	.156	.219	779.
285.	9.51754	94.77	.035	43.984	61.608	1.41716	.156	.219	786.
290.	9.68665	96.47	.035	44.766	62.703	1.42097	.156	.219	793.
295.	9.85569	98.18	.034	45.547	63.797	1.42471	.156	.219	799.
300.	10.02466	99.88	.034	46.327	64.890	1.42839	.156	.219	806.
310.	10.36246	103.28	.032	47.888	67.077	1.43555	.156	.219	820.
320.	10.70005	106.68	.031	49.449	69.262	1.44249	.156	.219	833.
330.	11.03747	110.07	.030	51.009	71.447	1.44922	.156	.218	846.
340.	11.37473	113.46	.030	52.568	73.631	1.45574	.156	.218	859.
350.	11.71185	116.85	.029	54.128	75.815	1.46207	.156	.218	872.
360.	12.04885	120.24	.028	55.687	77.998	1.46822	.156	.218	884.
370.	12.38573	123.62	.027	57.246	80.181	1.47420	.156	.218	896.
380.	12.72252	127.00	.026	58.805	82.364	1.48002	.156	.218	908.
390.	13.05921	130.38	.026	60.364	84.546	1.48569	.156	.218	920.
400.	13.39583	133.76	.025	61.924	86.729	1.49121	.156	.218	932.
410.	13.73236	137.14	.024	63.483	88.912	1.49660	.156	.218	944.
420.	14.06883	140.51	.024	65.043	91.095	1.50186	.156	.218	955.
430.	14.40524	143.89	.023	66.604	93.279	1.50700	.156	.218	966.
440.	14.74159	147.26	.023	68.165	95.463	1.51202	.156	.218	977.
450.	15.07789	150.63	.022	69.727	97.647	1.51693	.156	.219	988.
460.	15.41414	154.01	.022	71.290	99.833	1.52174	.156	.219	999.
470.	15.75034	157.38	.021	72.854	102.019	1.52644	.156	.219	1010.
480.	16.08651	160.75	.021	74.419	104.207	1.53104	.156	.219	1021.
490.	16.42263	164.11	.020	75.985	106.395	1.53556	.157	.219	1031.
500.	16.75873	167.48	.020	77.553	108.585	1.53998	.157	.219	1041.
510.	17.09479	170.85	.020	79.122	110.777	1.54432	.157	.219	1052.
520.	17.43082	174.22	.019	80.692	112.969	1.54858	.157	.219	1062.
530.	17.76682	177.58	.019	82.265	115.164	1.55276	.157	.220	1072.
540.	18.10280	180.95	.019	83.839	117.360	1.55686	.157	.220	1082.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

14.696 PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT3/LB	ISOTHERM DERIVATIVE FT3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	Cv BTU/LB-R	Cp BTU/LB-R	VELOCITY OF SOUND FT/S
* 97.867	.01226	2021.74	320.07	-83.208	-83.174	.50131	.260	.398	3787.
100.	.01231	1987.40	313.22	-82.359	-82.326	.50988	.259	.398	3758.
105.	.01243	1907.48	298.34	-80.371	-80.337	.52929	.258	.398	3694.
110.	.01255	1828.25	284.80	-78.382	-78.348	.54779	.255	.398	3632.
115.	.01267	1749.65	272.31	-76.394	-76.359	.56548	.253	.398	3571.
120.	.01280	1671.65	260.65	-74.404	-74.370	.58241	.250	.398	3511.
125.	.01293	1594.28	249.68	-72.414	-72.379	.59867	.247	.398	3451.
130.	.01306	1517.56	239.25	-70.421	-70.386	.61430	.244	.399	3391.
135.	.01320	1441.57	229.28	-68.427	-68.391	.62935	.240	.399	3330.
140.	.01334	1366.39	219.69	-66.429	-66.393	.64388	.237	.400	3269.
145.	.01348	1292.10	210.42	-64.428	-64.391	.65793	.233	.401	3206.
150.	.01364	1218.80	201.42	-62.422	-62.384	.67154	.230	.402	3142.
155.	.01379	1146.60	192.64	-60.410	-60.372	.68473	.226	.403	3076.
160.	.01396	1075.60	184.06	-58.391	-58.353	.69755	.223	.405	3008.
* 162.343	.01403	1042.77	180.10	-57.442	-57.404	.70344	.221	.405	2975.
* 162.343	3.58148	50.81	.096	24.461	34.207	1.26754	.159	.229	583.
165.	3.64606	51.81	.095	24.893	34.815	1.27126	.158	.229	588.
170.	3.76705	53.70	.091	25.704	35.955	1.27807	.158	.227	598.
175.	3.88741	55.56	.088	26.512	37.090	1.28465	.158	.227	608.
180.	4.00724	57.41	.085	27.316	38.221	1.29102	.158	.226	617.
185.	4.12659	59.24	.083	28.119	39.348	1.29719	.157	.225	626.
190.	4.24553	61.06	.080	28.919	40.472	1.30319	.157	.224	635.
195.	4.36409	62.87	.078	29.717	41.593	1.30901	.157	.224	644.
200.	4.48232	64.67	.076	30.514	42.712	1.31468	.157	.223	653.
205.	4.60025	66.46	.074	31.309	43.828	1.32019	.157	.223	662.
210.	4.71792	68.24	.072	32.103	44.942	1.32556	.157	.223	670.
215.	4.83535	70.01	.070	32.896	46.054	1.33079	.157	.222	678.
220.	4.95256	71.78	.069	33.688	47.165	1.33590	.157	.222	687.
225.	5.06957	73.54	.067	34.478	48.274	1.34088	.156	.222	695.
230.	5.18640	75.30	.065	35.268	49.382	1.34575	.156	.221	703.
235.	5.30307	77.05	.064	36.057	50.488	1.35051	.156	.221	711.
240.	5.41958	78.80	.062	36.845	51.593	1.35516	.156	.221	719.
245.	5.53596	80.55	.061	37.632	52.697	1.35972	.156	.221	726.
250.	5.65222	82.29	.060	38.419	53.800	1.36417	.156	.221	734.
255.	5.76835	84.02	.059	39.205	54.903	1.36854	.156	.220	741.
260.	5.88438	85.75	.057	39.991	56.004	1.37282	.156	.220	749.
265.	6.00030	87.49	.056	40.776	57.105	1.37701	.156	.220	756.
270.	6.11614	89.21	.055	41.561	58.205	1.38112	.156	.220	763.
275.	6.23189	90.94	.054	42.345	59.304	1.38516	.156	.220	771.
280.	6.34755	92.66	.053	43.129	60.403	1.38912	.156	.220	778.
285.	6.46315	94.38	.052	43.913	61.501	1.39300	.156	.220	785.
290.	6.57867	96.10	.051	44.696	62.599	1.39682	.156	.219	792.
295.	6.69413	97.82	.050	45.479	63.696	1.40057	.156	.219	799.
300.	6.80953	99.53	.050	46.262	64.792	1.40426	.156	.219	806.
310.	7.04016	102.96	.048	47.826	66.985	1.41145	.156	.219	819.
320.	7.27059	106.37	.046	49.390	69.175	1.41840	.156	.219	832.
330.	7.50084	109.79	.045	50.953	71.365	1.42514	.156	.219	846.
340.	7.73094	113.20	.044	52.515	73.553	1.43167	.156	.219	858.
350.	7.96089	116.60	.042	54.077	75.741	1.43801	.156	.219	871.
360.	8.19073	120.00	.041	55.638	77.928	1.44417	.156	.219	884.
370.	8.42044	123.40	.040	57.199	80.114	1.45016	.156	.219	896.
380.	8.65006	126.80	.039	58.760	82.300	1.45599	.156	.219	908.
390.	8.87959	130.19	.038	60.321	84.485	1.46167	.156	.219	920.
400.	9.10903	133.58	.037	61.882	86.671	1.46720	.156	.219	932.
410.	9.33840	136.97	.036	63.443	88.856	1.47260	.156	.219	943.
420.	9.56770	140.35	.035	65.005	91.042	1.47786	.156	.219	955.
430.	9.79694	143.74	.034	66.567	93.227	1.48301	.156	.219	966.
440.	10.02612	147.12	.034	68.129	95.413	1.48803	.156	.219	977.
450.	10.25525	150.50	.033	69.692	97.600	1.49295	.156	.219	988.
460.	10.48433	153.88	.032	71.256	99.787	1.49775	.156	.219	999.
470.	10.71336	157.26	.031	72.821	101.976	1.50246	.156	.219	1010.
480.	10.94236	160.63	.031	74.387	104.165	1.50707	.156	.219	1021.
490.	11.17132	164.01	.030	75.954	106.355	1.51158	.157	.219	1031.
500.	11.40024	167.38	.029	77.523	108.546	1.51601	.157	.219	1041.
510.	11.62913	170.76	.029	79.092	110.739	1.52035	.157	.219	1052.
520.	11.85799	174.13	.028	80.664	112.933	1.52461	.157	.219	1062.
530.	12.08682	177.50	.028	82.237	115.129	1.52880	.157	.220	1072.
540.	12.31563	180.87	.027	83.812	117.326	1.53290	.157	.220	1082.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMOOYNAMIC PROPERTIES OF OXYGEN

15. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 97.868	.01226	2021.76	320.07	-83.208	-83.174	.50131	.260	.398	3787.
100.	.01231	1987.43	313.22	-82.360	-82.325	.50988	.259	.398	3758.
105.	.01243	1907.51	298.34	-80.371	-80.337	.52929	.258	.398	3694.
110.	.01255	1828.28	284.80	-78.383	-78.348	.54779	.255	.398	3632.
115.	.01267	1749.68	272.31	-76.394	-76.359	.56547	.253	.398	3571.
120.	.01280	1671.68	260.66	-74.405	-74.369	.58241	.250	.398	3511.
125.	.01293	1594.31	249.68	-72.414	-72.378	.59866	.247	.398	3451.
130.	.01306	1517.59	239.25	-70.422	-70.385	.61429	.244	.399	3391.
135.	.01320	1441.60	229.28	-68.427	-68.390	.62935	.240	.399	3330.
140.	.01334	1366.42	219.70	-66.429	-66.392	.64388	.237	.400	3269.
145.	.01348	1292.13	210.42	-64.428	-64.391	.65793	.233	.401	3206.
150.	.01364	1218.83	201.42	-62.422	-62.384	.67154	.230	.402	3142.
155.	.01379	1146.63	192.65	-60.410	-60.372	.68473	.226	.403	3076.
160.	.01396	1075.63	184.06	-58.391	-58.352	.69755	.223	.405	3008.
* 162.696	.01405	1037.89	179.50	-57.299	-57.260	.70432	.221	.406	2971.
* 162.696	3.51472	50.87	.098	24.505	34.267	1.26668	.159	.229	584.
165.	3.56964	51.74	.097	24.880	34.795	1.26991	.158	.229	588.
170.	3.68833	53.62	.093	25.692	35.936	1.27672	.158	.228	598.
175.	3.80640	55.49	.090	26.500	37.073	1.28331	.158	.227	608.
180.	3.92393	57.34	.087	27.305	38.205	1.28968	.158	.226	617.
185.	4.04098	59.18	.085	28.108	39.333	1.29587	.157	.225	626.
190.	4.15761	61.00	.082	28.909	40.457	1.30186	.157	.225	635.
195.	4.27386	62.82	.080	29.708	41.579	1.30769	.157	.224	644.
200.	4.38978	64.62	.078	30.505	42.698	1.31336	.157	.224	653.
205.	4.50541	66.41	.076	31.301	43.815	1.31887	.157	.223	662.
210.	4.62077	68.19	.074	32.095	44.930	1.32425	.157	.223	670.
215.	4.73589	69.97	.072	32.888	46.043	1.32948	.157	.222	678.
220.	4.85078	71.74	.070	33.680	47.154	1.33459	.157	.222	687.
225.	4.96549	73.50	.068	34.471	48.263	1.33958	.156	.222	695.
230.	5.08001	75.26	.067	35.261	49.371	1.34445	.156	.221	703.
235.	5.19436	77.02	.065	36.050	50.478	1.34921	.156	.221	711.
240.	5.30857	78.77	.064	36.839	51.584	1.35387	.156	.221	718.
245.	5.42264	80.51	.062	37.626	52.688	1.35842	.156	.221	726.
250.	5.53658	82.25	.061	38.413	53.792	1.36288	.156	.221	734.
255.	5.65040	83.99	.060	39.200	54.894	1.36725	.156	.220	741.
260.	5.76412	85.72	.059	39.986	55.996	1.37152	.156	.220	749.
265.	5.87773	87.46	.057	40.771	57.097	1.37572	.156	.220	756.
270.	5.99125	89.19	.056	41.556	58.197	1.37983	.156	.220	763.
275.	6.10469	90.91	.055	42.340	59.297	1.38387	.156	.220	771.
280.	6.21805	92.63	.054	43.124	60.396	1.38783	.156	.220	778.
285.	6.33133	94.36	.053	43.908	61.494	1.39172	.156	.220	785.
290.	6.44454	96.08	.052	44.692	62.592	1.39553	.156	.220	792.
295.	6.55769	97.79	.051	45.475	63.689	1.39929	.156	.219	799.
300.	6.67077	99.51	.051	46.257	64.786	1.40297	.156	.219	806.
310.	6.89678	102.93	.049	47.822	66.979	1.41016	.156	.219	819.
320.	7.12258	106.36	.047	49.386	69.170	1.41712	.156	.219	832.
330.	7.34821	109.77	.046	50.949	71.359	1.42386	.156	.219	846.
340.	7.57368	113.18	.044	52.512	73.548	1.43039	.156	.219	858.
350.	7.79901	116.59	.043	54.073	75.736	1.43673	.156	.219	871.
360.	8.02422	119.99	.042	55.635	77.923	1.44289	.156	.219	884.
370.	8.24931	123.39	.041	57.196	80.110	1.44888	.156	.219	896.
380.	8.47430	126.78	.040	58.757	82.296	1.45471	.156	.219	908.
390.	8.69921	130.18	.039	60.319	84.481	1.46039	.156	.219	920.
400.	8.92402	133.57	.038	61.880	86.667	1.46592	.156	.219	932.
410.	9.14877	136.96	.037	63.441	88.852	1.47132	.156	.219	943.
420.	9.37344	140.34	.036	65.002	91.038	1.47659	.156	.219	955.
430.	9.59806	143.73	.035	66.564	93.224	1.48173	.156	.219	966.
440.	9.82261	147.11	.034	68.127	95.410	1.48676	.156	.219	977.
450.	10.04711	150.49	.033	69.690	97.597	1.49167	.156	.219	988.
460.	10.27157	153.87	.033	71.254	99.784	1.49648	.156	.219	999.
470.	10.49598	157.25	.032	72.819	101.973	1.50118	.156	.219	1010.
480.	10.72035	160.63	.031	74.385	104.162	1.50579	.156	.219	1021.
490.	10.94468	164.00	.031	75.952	106.352	1.51031	.157	.219	1031.
500.	11.16898	167.38	.030	77.521	108.544	1.51474	.157	.219	1041.
510.	11.39325	170.75	.029	79.090	110.736	1.51908	.157	.219	1052.
520.	11.61748	174.12	.029	80.662	112.931	1.52334	.157	.219	1062.
530.	11.84169	177.50	.028	82.235	115.126	1.52752	.157	.220	1072.
540.	12.06587	180.87	.028	83.810	117.324	1.53163	.157	.220	1082.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

20. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT3/LB	ISOTHERM DERIVATIVE FT3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	Cv BTU/LB-R	Cp BTU/LB-R	VELOCITY OF SOUND FT/S
* 97.875	.01226	2022.05	320.07	-83.207	-83.162	.50131	.260	.398	3787.
100.	.01231	1987.84	313.24	-82.362	-82.316	.50986	.259	.398	3758.
105.	.01243	1907.93	298.36	-80.373	-80.327	.52927	.258	.398	3694.
110.	.01255	1828.72	284.82	-78.385	-78.339	.54777	.255	.398	3632.
115.	.01267	1750.13	272.33	-76.397	-76.350	.56545	.253	.398	3571.
120.	.01280	1672.14	260.68	-74.407	-74.360	.58239	.250	.398	3511.
125.	.01293	1594.78	249.70	-72.417	-72.369	.59864	.247	.398	3452.
130.	.01306	1518.08	239.28	-70.425	-70.377	.61427	.244	.399	3391.
135.	.01320	1442.10	229.31	-68.431	-68.382	.62933	.240	.399	3331.
140.	.01334	1366.93	219.72	-66.433	-66.384	.64386	.237	.400	3269.
145.	.01348	1292.66	210.45	-64.432	-64.382	.65790	.233	.401	3206.
150.	.01363	1219.37	201.45	-62.426	-62.376	.67151	.230	.402	3142.
155.	.01379	1147.19	192.68	-60.414	-60.363	.68470	.226	.403	3076.
160.	.01395	1076.21	184.10	-58.396	-58.344	.69752	.223	.405	3008.
165.	.01412	1006.54	175.68	-56.369	-56.317	.71000	.219	.406	2939.
* 167.840	.01423	967.60	170.97	-55.213	-55.161	.71694	.218	.408	2898.
* 167.840	2.69739	51.59	.129	25.129	35.119	1.25464	.160	.232	590.
170.	2.73663	52.43	.127	25.485	35.620	1.25761	.159	.232	595.
175.	2.82700	54.38	.123	26.306	36.776	1.26431	.159	.230	604.
180.	2.91677	56.29	.118	27.123	37.925	1.27079	.159	.229	614.
185.	3.00603	58.19	.115	27.936	39.069	1.27706	.158	.228	623.
190.	3.09484	60.07	.111	28.746	40.208	1.28313	.158	.227	633.
195.	3.18325	61.93	.108	29.554	41.343	1.28902	.158	.227	642.
200.	3.27132	63.78	.105	30.358	42.474	1.29475	.158	.226	651.
205.	3.35907	65.61	.102	31.161	43.601	1.30032	.157	.225	659.
210.	3.44654	67.43	.099	31.962	44.726	1.30574	.157	.225	668.
215.	3.53376	69.25	.097	32.761	45.848	1.31102	.157	.224	676.
220.	3.62075	71.05	.094	33.558	46.967	1.31617	.157	.224	685.
225.	3.70754	72.84	.092	34.354	48.085	1.32119	.157	.223	693.
230.	3.79415	74.63	.090	35.149	49.200	1.32609	.157	.223	701.
235.	3.88058	76.41	.088	35.942	50.314	1.33088	.157	.223	709.
240.	3.96686	78.19	.086	36.735	51.426	1.33556	.157	.222	717.
245.	4.05300	79.95	.084	37.526	52.536	1.34014	.157	.222	725.
250.	4.13901	81.72	.082	38.317	53.645	1.34463	.156	.222	732.
255.	4.22490	83.48	.080	39.107	54.753	1.34901	.156	.221	740.
260.	4.31068	85.23	.079	39.896	55.860	1.35331	.156	.221	748.
265.	4.39636	86.98	.077	40.684	56.966	1.35752	.156	.221	755.
270.	4.48194	88.73	.076	41.472	58.070	1.36165	.156	.221	762.
275.	4.56744	90.47	.074	42.259	59.174	1.36570	.156	.221	770.
280.	4.65285	92.21	.073	43.046	60.277	1.36968	.156	.221	777.
285.	4.73819	93.95	.071	43.832	61.379	1.37358	.156	.220	784.
290.	4.82346	95.68	.070	44.617	62.481	1.37741	.156	.220	791.
295.	4.90866	97.41	.069	45.402	63.582	1.38117	.156	.220	798.
300.	4.99381	99.14	.068	46.187	64.682	1.38487	.156	.220	805.
310.	5.16392	102.59	.065	47.756	66.880	1.39208	.156	.220	818.
320.	5.33384	106.03	.063	49.323	69.077	1.39906	.156	.220	832.
330.	5.50357	109.47	.061	50.889	71.272	1.40581	.156	.219	845.
340.	5.67315	112.90	.059	52.455	73.465	1.41236	.156	.219	858.
350.	5.84259	116.32	.058	54.019	75.657	1.41871	.156	.219	871.
360.	6.01190	119.74	.056	55.583	77.848	1.42488	.156	.219	883.
370.	6.18110	123.15	.055	57.147	80.038	1.43088	.156	.219	896.
380.	6.35020	126.56	.053	58.710	82.227	1.43672	.156	.219	908.
390.	6.51920	129.97	.052	60.273	84.416	1.44241	.156	.219	920.
400.	6.68812	133.37	.050	61.835	86.605	1.44795	.156	.219	931.
410.	6.85697	136.77	.049	63.398	88.793	1.45335	.156	.219	943.
420.	7.02575	140.17	.048	64.961	90.981	1.45862	.156	.219	955.
430.	7.19447	143.56	.047	66.525	93.169	1.46377	.156	.219	966.
440.	7.36312	146.96	.046	68.089	95.358	1.46880	.156	.219	977.
450.	7.53173	150.35	.045	69.653	97.547	1.47372	.156	.219	988.
460.	7.70029	153.74	.044	71.218	99.736	1.47854	.156	.219	999.
470.	7.86880	157.12	.043	72.784	101.926	1.48324	.156	.219	1010.
480.	8.03728	160.51	.042	74.351	104.117	1.48786	.156	.219	1021.
490.	8.20571	163.89	.041	75.919	106.309	1.49238	.157	.219	1031.
500.	8.37411	167.27	.040	77.489	108.502	1.49681	.157	.219	1041.
510.	8.54248	170.65	.039	79.059	110.696	1.50115	.157	.219	1052.
520.	8.71082	174.03	.039	80.631	112.892	1.50542	.157	.220	1062.
530.	8.87913	177.41	.038	82.205	115.089	1.50960	.157	.220	1072.
540.	9.04741	180.79	.037	83.781	117.288	1.51371	.157	.220	1082.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

25. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 97.882	.01226	2022.34	320.07	-83.206	-83.150	.50132	.260	.398	3787.
100.	.01231	1988.26	313.27	-82.364	-82.307	.50984	.259	.398	3759.
105.	.01243	1908.36	298.39	-80.376	-80.318	.52924	.258	.398	3694.
110.	.01255	1829.15	284.85	-78.388	-78.330	.54775	.255	.398	3632.
115.	.01267	1750.58	272.36	-76.399	-76.341	.56543	.253	.398	3572.
120.	.01280	1672.61	260.71	-74.410	-74.351	.58236	.250	.398	3512.
125.	.01293	1595.25	249.73	-72.420	-72.360	.59862	.247	.398	3452.
130.	.01306	1518.56	239.31	-70.428	-70.368	.61424	.244	.399	3392.
135.	.01320	1442.60	229.34	-68.434	-68.373	.62930	.240	.399	3331.
140.	.01334	1367.45	219.75	-66.437	-66.375	.64383	.237	.400	3269.
145.	.01348	1293.18	210.48	-64.436	-64.373	.65788	.233	.401	3207.
150.	.01363	1219.91	201.48	-62.430	-62.367	.67148	.230	.402	3143.
155.	.01379	1147.74	192.71	-60.419	-60.355	.68467	.226	.403	3077.
160.	.01395	1076.78	184.13	-58.401	-58.336	.69749	.223	.404	3009.
165.	.01412	1007.13	175.71	-56.374	-56.309	.70997	.219	.406	2939.
170.	.01430	938.92	167.45	-54.338	-54.272	.72213	.216	.408	2867.
* 172.077	.01438	911.04	164.05	-53.489	-53.422	.72709	.215	.409	2836.
* 172.077	2.19572	52.06	.160	25.619	35.784	1.24532	.160	.236	595.
175.	2.23882	53.23	.156	26.107	36.471	1.24928	.160	.234	601.
180.	2.31204	55.22	.151	26.936	37.639	1.25587	.160	.233	611.
185.	2.38469	57.18	.146	27.760	38.799	1.26222	.159	.231	621.
190.	2.45687	59.12	.141	28.580	39.954	1.26838	.159	.230	630.
195.	2.52863	61.03	.137	29.396	41.102	1.27435	.159	.229	639.
200.	2.60001	62.92	.133	30.209	42.245	1.28014	.158	.228	648.
205.	2.67107	64.80	.129	31.019	43.384	1.28576	.158	.227	657.
210.	2.74184	66.66	.125	31.826	44.519	1.29123	.158	.227	666.
215.	2.81234	68.51	.122	32.631	45.651	1.29655	.158	.226	675.
220.	2.88261	70.35	.119	33.434	46.779	1.30174	.157	.225	683.
225.	2.95267	72.18	.116	34.236	47.904	1.30680	.157	.225	691.
230.	3.02254	73.99	.113	35.035	49.027	1.31174	.157	.224	700.
235.	3.09223	75.80	.110	35.833	50.148	1.31656	.157	.224	708.
240.	3.16177	77.60	.108	36.630	51.267	1.32127	.157	.224	716.
245.	3.23116	79.39	.105	37.425	52.383	1.32587	.157	.223	723.
250.	3.30041	81.18	.103	38.220	53.498	1.33038	.157	.223	731.
255.	3.36955	82.96	.101	39.013	54.612	1.33479	.157	.223	739.
260.	3.43857	84.73	.099	39.805	55.723	1.33910	.157	.222	746.
265.	3.50749	86.50	.097	40.597	56.834	1.34334	.157	.222	754.
270.	3.57632	88.27	.095	41.387	57.943	1.34748	.156	.222	761.
275.	3.64505	90.03	.093	42.177	59.051	1.35155	.156	.221	769.
280.	3.71371	91.78	.091	42.966	60.158	1.35554	.156	.221	776.
285.	3.78229	93.53	.090	43.755	61.264	1.35945	.156	.221	783.
290.	3.85079	95.28	.088	44.543	62.369	1.36330	.156	.221	790.
295.	3.91923	97.03	.086	45.330	63.474	1.36707	.156	.221	797.
300.	3.98761	98.77	.085	46.117	64.577	1.37078	.156	.221	804.
310.	4.12420	102.24	.082	47.689	66.782	1.37801	.156	.220	818.
320.	4.26058	105.71	.079	49.260	68.984	1.38500	.156	.220	831.
330.	4.39678	109.16	.077	50.829	71.184	1.39177	.156	.220	844.
340.	4.53283	112.61	.075	52.398	73.382	1.39833	.156	.220	857.
350.	4.66873	116.05	.072	53.965	75.578	1.40470	.156	.220	870.
360.	4.80451	119.49	.070	55.531	77.773	1.41088	.156	.219	883.
370.	4.94017	122.92	.068	57.097	79.966	1.41689	.156	.219	895.
380.	5.07573	126.34	.066	58.662	82.159	1.42274	.156	.219	907.
390.	5.21120	129.76	.065	60.227	84.351	1.42843	.156	.219	919.
400.	5.34658	133.18	.063	61.791	86.542	1.43398	.156	.219	931.
410.	5.48189	136.59	.061	63.356	88.733	1.43939	.156	.219	943.
420.	5.61713	140.00	.060	64.920	90.924	1.44467	.156	.219	954.
430.	5.75231	143.40	.059	66.485	93.115	1.44982	.156	.219	966.
440.	5.88743	146.80	.057	68.050	95.305	1.45486	.156	.219	977.
450.	6.02250	150.20	.056	69.616	97.496	1.45978	.156	.219	988.
460.	6.15752	153.60	.055	71.182	99.688	1.46460	.156	.219	999.
470.	6.29250	156.99	.054	72.749	101.879	1.46931	.156	.219	1010.
480.	6.42743	160.39	.052	74.317	104.072	1.47393	.156	.219	1020.
490.	6.56233	163.78	.051	75.886	106.266	1.47845	.157	.219	1031.
500.	6.69719	167.17	.050	77.457	108.460	1.48289	.157	.220	1041.
510.	6.83202	170.56	.049	79.028	110.656	1.48723	.157	.220	1052.
520.	6.96682	173.94	.048	80.601	112.853	1.49150	.157	.220	1062.
530.	7.10159	177.33	.047	82.176	115.051	1.49569	.157	.220	1072.
540.	7.23634	180.71	.046	83.752	117.251	1.49980	.157	.220	1082.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

30. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT3/LB	ISOTHERM DERIVATIVE FT3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_p BTU/LB-R	VELOCITY OF SOUND FT/S
* 97.889	.01226	2022.64	320.07	-83.206	-83.138	.50133	.260	.398	3787.
100.	.01231	1988.67	313.29	-82.366	-82.298	.50981	.259	.398	3759.
105.	.01243	1908.78	298.41	-80.378	-80.309	.52922	.258	.398	3695.
110.	.01255	1829.59	284.87	-78.390	-78.320	.54772	.255	.398	3633.
115.	.01267	1751.03	272.38	-76.402	-76.331	.56541	.253	.398	3572.
120.	.01280	1673.07	260.73	-74.413	-74.342	.58234	.250	.398	3512.
125.	.01293	1595.73	249.76	-72.423	-72.351	.59859	.247	.398	3452.
130.	.01306	1519.05	239.33	-70.431	-70.359	.61422	.244	.399	3392.
135.	.01320	1443.10	229.37	-68.437	-68.364	.62927	.240	.399	3331.
140.	.01334	1367.96	219.78	-66.441	-66.366	.64380	.237	.400	3270.
145.	.01348	1293.71	210.51	-64.440	-64.365	.65785	.233	.401	3207.
150.	.01363	1220.46	201.51	-62.435	-62.359	.67145	.230	.402	3143.
155.	.01379	1148.30	192.74	-60.424	-60.347	.68464	.226	.403	3077.
160.	.01395	1077.35	184.16	-58.406	-58.328	.69746	.223	.404	3010.
165.	.01412	1007.72	175.75	-56.380	-56.301	.70993	.219	.406	2940.
170.	.01430	939.52	167.48	-54.344	-54.264	.72209	.216	.408	2867.
175.	.01449	872.87	159.34	-52.296	-52.216	.73397	.213	.411	2792.
* 175.711	.01452	863.53	158.20	-52.004	-51.924	.73564	.213	.411	2782.
* 175.711	1.85512	52.36	.190	26.021	36.326	1.23771	.161	.238	599.
180.	1.90849	54.12	.184	26.743	37.345	1.24344	.161	.237	608.
185.	1.97015	56.15	.178	27.579	38.524	1.24990	.160	.235	618.
190.	2.03129	58.15	.172	28.410	39.694	1.25614	.160	.233	627.
195.	2.09199	60.12	.166	29.235	40.857	1.26218	.159	.232	637.
200.	2.15229	62.06	.161	30.057	42.013	1.26804	.159	.231	646.
205.	2.21225	63.98	.156	30.874	43.164	1.27372	.159	.230	655.
210.	2.27190	65.89	.152	31.689	44.310	1.27924	.158	.229	664.
215.	2.33128	67.78	.148	32.500	45.451	1.28462	.158	.228	673.
220.	2.39042	69.65	.144	33.309	46.589	1.28985	.158	.227	681.
225.	2.44933	71.51	.140	34.116	47.723	1.29494	.158	.226	690.
230.	2.50805	73.35	.137	34.921	48.853	1.29991	.158	.226	698.
235.	2.56660	75.19	.133	35.723	49.981	1.30476	.157	.225	706.
240.	2.62498	77.01	.130	36.524	51.107	1.30950	.157	.225	714.
245.	2.68321	78.83	.127	37.324	52.230	1.31413	.157	.224	722.
250.	2.74130	80.64	.125	38.122	53.350	1.31866	.157	.224	730.
255.	2.79928	82.44	.122	38.919	54.469	1.32309	.157	.224	738.
260.	2.85713	84.23	.119	39.714	55.586	1.32743	.157	.223	745.
265.	2.91489	86.02	.117	40.509	56.702	1.33168	.157	.223	753.
270.	2.97254	87.80	.114	41.302	57.815	1.33584	.157	.223	760.
275.	3.03011	89.58	.112	42.095	58.928	1.33993	.157	.222	768.
280.	3.08759	91.35	.110	42.887	60.039	1.34393	.157	.222	775.
285.	3.14500	93.12	.108	43.678	61.149	1.34786	.156	.222	782.
290.	3.20233	94.88	.106	44.468	62.257	1.35171	.156	.222	789.
295.	3.25960	96.64	.104	45.257	63.365	1.35550	.156	.221	796.
300.	3.31680	98.40	.102	46.046	64.472	1.35922	.156	.221	803.
310.	3.43104	101.90	.099	47.623	66.683	1.36647	.156	.221	817.
320.	3.54507	105.38	.096	49.197	68.890	1.37348	.156	.221	831.
330.	3.65892	108.86	.093	50.769	71.095	1.38027	.156	.220	844.
340.	3.77261	112.33	.090	52.340	73.298	1.38684	.156	.220	857.
350.	3.88615	115.79	.087	53.910	75.499	1.39322	.156	.220	870.
360.	3.99957	119.24	.084	55.479	77.697	1.39941	.156	.220	882.
370.	4.11288	122.68	.082	57.047	79.895	1.40543	.156	.220	895.
380.	4.22608	126.12	.080	58.614	82.091	1.41129	.156	.220	907.
390.	4.33919	129.55	.078	60.181	84.286	1.41699	.156	.219	919.
400.	4.45222	132.98	.076	61.747	86.480	1.42255	.156	.219	931.
410.	4.56517	136.40	.074	63.313	88.674	1.42796	.156	.219	943.
420.	4.67806	139.82	.072	64.879	90.867	1.43325	.156	.219	954.
430.	4.79088	143.24	.070	66.446	93.060	1.43841	.156	.219	966.
440.	4.90364	146.65	.069	68.012	95.253	1.44345	.156	.219	977.
450.	5.01635	150.06	.067	69.579	97.446	1.44838	.156	.219	988.
460.	5.12901	153.47	.066	71.146	99.639	1.45320	.156	.219	999.
470.	5.24163	156.87	.064	72.715	101.833	1.45792	.156	.219	1010.
480.	5.35421	160.27	.063	74.283	104.027	1.46254	.157	.219	1020.
490.	5.46675	163.67	.062	75.853	106.222	1.46706	.157	.220	1031.
500.	5.57925	167.06	.060	77.425	108.418	1.47150	.157	.220	1041.
510.	5.69172	170.46	.059	78.997	110.616	1.47585	.157	.220	1052.
520.	5.80416	173.85	.058	80.571	112.814	1.48012	.157	.220	1062.
530.	5.91657	177.24	.057	82.146	115.014	1.48431	.157	.220	1072.
540.	6.02896	180.63	.056	83.723	117.215	1.48842	.157	.220	1082.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

35. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT3/LB	ISOTHERM OERIVATIVE FT3-PSIA/LB	ISOCHORE OERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	Cp BTU/LB-R	VELOCITY OF SOUND FT/S
* 97.896	.01226	2022.93	320.07	-83.205	-83.126	.50133	.260	.398	3787.
100.	.01231	1989.08	313.32	-82.368	-82.289	.50979	.259	.398	3759.
105.	.01243	1909.21	298.44	-80.380	-80.300	.52920	.258	.398	3695.
110.	.01255	1830.03	284.90	-78.393	-78.311	.54770	.255	.398	3633.
115.	.01267	1751.48	272.41	-76.405	-76.322	.56538	.253	.398	3572.
120.	.01280	1673.53	260.76	-74.416	-74.333	.58232	.250	.398	3512.
125.	.01293	1596.20	249.78	-72.426	-72.342	.59857	.247	.398	3453.
130.	.01306	1519.54	239.36	-70.435	-70.350	.61419	.244	.399	3393.
135.	.01320	1443.60	229.39	-68.441	-68.355	.62925	.240	.399	3332.
140.	.01334	1368.47	219.81	-66.444	-66.358	.64378	.237	.400	3270.
145.	.01348	1294.24	210.54	-64.444	-64.356	.65782	.233	.401	3208.
150.	.01363	1221.00	201.54	-62.439	-62.350	.67142	.230	.402	3144.
155.	.01379	1148.86	192.77	-60.428	-60.339	.68461	.226	.403	3078.
160.	.01395	1077.92	184.19	-58.411	-58.320	.69743	.223	.404	3010.
165.	.01412	1008.31	175.78	-56.385	-56.294	.70990	.219	.406	2940.
170.	.01430	940.13	167.52	-54.350	-54.257	.72206	.216	.408	2868.
175.	.01449	873.50	159.38	-52.302	-52.209	.73394	.213	.411	2793.
* 178.912	.01464	822.51	153.10	-50.691	-50.596	.74305	.211	.413	2732.
* 178.912	1.60808	52.55	.221	26.359	36.781	1.23126	.162	.241	602.
180.	1.61988	53.00	.219	26.545	37.043	1.23273	.162	.241	605.
185.	1.67375	55.10	.211	27.394	38.242	1.23930	.161	.238	615.
190.	1.72706	57.16	.203	28.236	39.429	1.24563	.161	.237	625.
195.	1.77989	59.19	.197	29.072	40.607	1.25175	.160	.235	634.
200.	1.83231	61.19	.190	29.902	41.777	1.25767	.160	.233	644.
205.	1.88437	63.16	.185	30.728	42.941	1.26342	.159	.232	653.
210.	1.93610	65.10	.179	31.550	44.098	1.26900	.159	.231	662.
215.	1.98756	67.03	.174	32.368	45.249	1.27442	.159	.230	671.
220.	2.03876	68.94	.169	33.183	46.396	1.27969	.158	.229	679.
225.	2.08973	70.83	.165	33.995	47.539	1.28483	.158	.228	688.
230.	2.14050	72.71	.161	34.805	48.678	1.28983	.158	.227	696.
235.	2.19108	74.57	.157	35.613	49.813	1.29471	.158	.227	705.
240.	2.24150	76.42	.153	36.418	50.945	1.29948	.158	.226	713.
245.	2.29177	78.26	.150	37.222	52.075	1.30414	.157	.226	721.
250.	2.34190	80.10	.146	38.024	53.202	1.30869	.157	.225	729.
255.	2.39190	81.92	.143	38.824	54.326	1.31315	.157	.225	736.
260.	2.44179	83.73	.140	39.623	55.448	1.31750	.157	.224	744.
265.	2.49157	85.54	.137	40.420	56.568	1.32177	.157	.224	752.
270.	2.54125	87.34	.134	41.217	57.687	1.32595	.157	.224	759.
275.	2.59084	89.14	.132	42.012	58.804	1.33005	.157	.223	767.
280.	2.64034	90.92	.129	42.807	59.919	1.33407	.157	.223	774.
285.	2.68977	92.71	.127	43.600	61.033	1.33801	.157	.223	781.
290.	2.73913	94.48	.124	44.393	62.145	1.34188	.157	.222	788.
295.	2.78841	96.26	.122	45.185	63.256	1.34568	.157	.222	796.
300.	2.83764	98.03	.120	45.976	64.367	1.34941	.156	.222	803.
310.	2.93591	101.55	.116	47.556	66.584	1.35668	.156	.222	816.
320.	3.03398	105.06	.112	49.133	68.797	1.36371	.156	.221	830.
330.	3.13186	108.56	.108	50.709	71.007	1.37051	.156	.221	843.
340.	3.22959	112.04	.105	52.283	73.214	1.37710	.156	.221	856.
350.	3.32717	115.52	.102	53.856	75.419	1.38349	.156	.220	869.
360.	3.42462	118.99	.099	55.427	77.622	1.38970	.156	.220	882.
370.	3.52196	122.45	.096	56.997	79.823	1.39573	.156	.220	894.
380.	3.61919	125.90	.093	58.566	82.022	1.40159	.156	.220	907.
390.	3.71633	129.35	.091	60.135	84.221	1.40730	.156	.220	919.
400.	3.81339	132.79	.089	61.703	86.418	1.41286	.156	.220	931.
410.	3.91038	136.22	.086	63.271	88.614	1.41829	.156	.220	942.
420.	4.00729	139.65	.084	64.838	90.810	1.42358	.156	.220	954.
430.	4.10414	143.08	.082	66.406	93.005	1.42874	.156	.220	965.
440.	4.20093	146.50	.080	67.974	95.200	1.43379	.156	.220	977.
450.	4.29767	149.92	.079	69.542	97.395	1.43872	.156	.220	988.
460.	4.39436	153.33	.077	71.110	99.591	1.44355	.156	.220	999.
470.	4.49101	156.74	.075	72.680	101.786	1.44827	.156	.220	1010.
480.	4.58762	160.15	.073	74.250	103.982	1.45289	.157	.220	1020.
490.	4.68419	163.56	.072	75.820	106.179	1.45742	.157	.220	1031.
500.	4.78072	166.96	.071	77.392	108.377	1.46186	.157	.220	1041.
510.	4.87722	170.36	.069	78.966	110.575	1.46622	.157	.220	1052.
520.	4.97369	173.76	.068	80.540	112.775	1.47049	.157	.220	1062.
530.	5.07013	177.16	.066	82.116	114.976	1.47468	.157	.220	1072.
540.	5.16655	180.55	.065	83.694	117.179	1.47880	.157	.220	1082.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

40. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT3/LB	ISOTHERM DERIVATIVE FT3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	Cv BTU/LB-R	Cp BTU/LB-R	VELOCITY OF SOUND FT/S
* 97.903	.01226	2023.22	320.07	-83.204	-83.114	.50134	.260	.398	3788.
100.	.01231	1989.49	313.34	-82.371	-82.279	.50977	.259	.398	3760.
105.	.01243	1909.63	298.46	-80.383	-80.291	.52918	.258	.398	3695.
110.	.01255	1830.46	284.92	-78.395	-78.302	.54768	.255	.398	3633.
115.	.01267	1751.92	272.43	-76.407	-76.313	.56536	.253	.398	3573.
120.	.01280	1673.99	260.78	-74.419	-74.324	.58229	.250	.398	3513.
125.	.01293	1596.67	249.81	-72.429	-72.333	.59854	.247	.398	3453.
130.	.01306	1520.02	239.39	-70.438	-70.341	.61417	.244	.399	3393.
135.	.01320	1444.10	229.42	-68.444	-68.347	.62922	.240	.399	3332.
140.	.01334	1368.99	219.84	-66.448	-66.349	.64375	.237	.400	3271.
145.	.01348	1294.77	210.57	-64.448	-64.348	.65779	.233	.401	3208.
150.	.01363	1221.54	201.57	-62.443	-62.342	.67139	.230	.402	3144.
155.	.01379	1149.41	192.80	-60.433	-60.331	.68458	.226	.403	3078.
160.	.01395	1078.50	184.23	-58.416	-58.312	.69740	.223	.404	3011.
165.	.01412	1008.90	175.82	-56.390	-56.286	.70987	.219	.406	2941.
170.	.01430	940.74	167.55	-54.355	-54.249	.72203	.216	.408	2869.
175.	.01449	874.12	159.42	-52.309	-52.201	.73390	.213	.411	2794.
180.	.01468	809.16	151.40	-50.248	-50.140	.74552	.210	.414	2716.
* 181.786	.01475	786.37	148.56	-49.508	-49.399	.74961	.209	.415	2687.
* 181.786	1.42035	52.65	.251	26.650	37.170	1.22567	.163	.244	605.
185.	1.45118	54.03	.245	27.234	37.952	1.22994	.162	.242	612.
190.	1.49867	56.16	.236	28.058	39.158	1.23637	.162	.240	622.
195.	1.54564	58.25	.228	28.904	40.353	1.24257	.161	.238	632.
200.	1.59218	60.30	.220	29.744	41.537	1.24857	.160	.236	641.
205.	1.63833	62.32	.214	30.579	42.714	1.25438	.160	.234	651.
210.	1.68415	64.31	.207	31.408	43.883	1.26002	.160	.233	660.
215.	1.72967	66.28	.201	32.234	45.045	1.26549	.159	.232	669.
220.	1.77493	68.22	.195	33.055	46.202	1.27081	.159	.231	679.
225.	1.81996	70.15	.190	33.873	47.354	1.27598	.159	.230	686.
230.	1.86477	72.06	.185	34.688	48.501	1.28102	.158	.229	695.
235.	1.90940	73.95	.181	35.501	49.644	1.28594	.158	.228	703.
240.	1.95385	75.83	.176	36.311	50.783	1.29074	.158	.228	711.
245.	1.99815	77.70	.172	37.119	51.919	1.29542	.158	.227	719.
250.	2.04231	79.55	.168	37.924	53.052	1.30000	.158	.226	727.
255.	2.08634	81.40	.164	38.728	54.182	1.30448	.157	.226	735.
260.	2.13025	83.23	.161	39.531	55.309	1.30885	.157	.225	743.
265.	2.17406	85.06	.157	40.332	56.435	1.31314	.157	.225	751.
270.	2.21776	86.88	.154	41.131	57.558	1.31734	.157	.224	758.
275.	2.26137	88.69	.151	41.929	58.679	1.32145	.157	.224	766.
280.	2.30489	90.49	.148	42.726	59.799	1.32549	.157	.224	773.
285.	2.34834	92.29	.145	43.522	60.916	1.32945	.157	.223	780.
290.	2.39171	94.08	.143	44.317	62.033	1.33333	.157	.223	788.
295.	2.43501	95.87	.140	45.111	63.147	1.33714	.157	.223	795.
300.	2.47825	97.65	.137	45.905	64.261	1.34088	.157	.223	802.
310.	2.56456	101.20	.133	47.489	66.484	1.34817	.156	.222	816.
320.	2.65065	104.74	.128	49.070	68.703	1.35522	.156	.222	829.
330.	2.73657	108.26	.124	50.649	70.918	1.36203	.156	.221	843.
340.	2.82232	111.76	.120	52.226	73.130	1.36864	.156	.221	856.
350.	2.90792	115.25	.117	53.801	75.340	1.37504	.156	.221	869.
360.	2.99340	118.74	.113	55.374	77.546	1.38126	.156	.221	882.
370.	3.07876	122.21	.110	56.947	79.751	1.38730	.156	.220	894.
380.	3.16402	125.68	.107	58.518	81.954	1.39317	.156	.220	906.
390.	3.24919	129.14	.104	60.089	84.155	1.39889	.156	.220	919.
400.	3.33427	132.59	.101	61.659	86.355	1.40446	.156	.220	930.
410.	3.41928	136.04	.099	63.228	88.554	1.40989	.156	.220	942.
420.	3.50421	139.48	.096	64.797	90.753	1.41519	.156	.220	954.
430.	3.58909	142.92	.094	66.366	92.950	1.42036	.156	.220	965.
440.	3.67390	146.35	.092	67.935	95.148	1.42541	.156	.220	977.
450.	3.75867	149.77	.090	69.505	97.345	1.43035	.156	.220	988.
460.	3.84338	153.20	.088	71.074	99.542	1.43518	.156	.220	999.
470.	3.92805	156.62	.086	72.645	101.739	1.43990	.156	.220	1010.
480.	4.01268	160.03	.084	74.216	103.937	1.44453	.157	.220	1020.
490.	4.09727	163.45	.082	75.788	106.136	1.44906	.157	.220	1031.
500.	4.18182	166.86	.081	77.360	108.335	1.45351	.157	.220	1041.
510.	4.26634	170.26	.079	78.934	110.535	1.45786	.157	.220	1052.
520.	4.35084	173.67	.078	80.510	112.736	1.46214	.157	.220	1062.
530.	4.43530	177.07	.076	82.087	114.939	1.46633	.157	.220	1072.
540.	4.51974	180.47	.075	83.665	117.143	1.47045	.157	.220	1082.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

45. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 97.910	.01226	2023.52	320.07	-83.204	-83.102	.50135	.260	.398	3788.
100.	.01231	1989.91	313.37	-82.373	-82.270	.50975	.259	.398	3760.
105.	.01243	1910.06	298.49	-80.385	-80.282	.52915	.258	.398	3696.
110.	.01255	1830.90	284.95	-78.398	-78.293	.54766	.256	.398	3634.
115.	.01267	1752.37	272.46	-76.410	-76.304	.56534	.253	.398	3573.
120.	.01280	1674.45	260.81	-74.422	-74.315	.58227	.250	.398	3513.
125.	.01293	1597.15	249.83	-72.432	-72.324	.59852	.247	.398	3453.
130.	.01306	1520.51	239.41	-70.441	-70.332	.61415	.244	.399	3393.
135.	.01319	1444.60	229.45	-68.448	-68.338	.62920	.240	.399	3333.
140.	.01334	1369.50	219.86	-66.452	-66.340	.64372	.237	.400	3271.
145.	.01348	1295.29	210.60	-64.452	-64.339	.65777	.234	.401	3209.
150.	.01363	1222.08	201.60	-62.447	-62.334	.67137	.230	.402	3144.
155.	.01379	1149.97	192.83	-60.437	-60.322	.68455	.226	.403	3079.
160.	.01395	1079.07	184.26	-58.421	-58.304	.69737	.223	.404	3011.
165.	.01412	1009.49	175.85	-56.398	-56.278	.70984	.220	.406	2942.
170.	.01430	941.34	167.59	-54.361	-54.242	.72199	.216	.408	2869.
175.	.01448	874.74	159.46	-52.315	-52.194	.73386	.213	.411	2795.
180.	.01468	809.80	151.44	-50.255	-50.133	.74548	.210	.414	2717.
* 184.403	.01486	754.07	144.47	-48.428	-48.304	.75552	.208	.417	2645.
* 184.403	1.27264	52.68	.282	26.904	37.508	1.22072	.163	.247	607.
185.	1.27781	52.93	.281	27.008	37.656	1.22152	.163	.247	603.
190.	1.32081	55.14	.270	27.875	38.881	1.22806	.163	.244	619.
195.	1.36327	57.29	.260	28.734	40.093	1.23436	.162	.241	629.
200.	1.40526	59.40	.251	29.584	41.293	1.24043	.161	.239	639.
205.	1.44684	61.47	.243	30.427	42.484	1.24631	.161	.237	648.
210.	1.48808	63.51	.236	31.265	43.665	1.25200	.160	.235	658.
215.	1.52900	65.52	.229	32.098	44.838	1.25753	.160	.234	667.
220.	1.56966	67.50	.222	32.926	46.005	1.26289	.159	.233	676.
225.	1.61007	69.46	.216	33.750	47.166	1.26811	.159	.232	684.
230.	1.65026	71.40	.210	34.571	48.322	1.27319	.159	.231	693.
235.	1.69026	73.33	.205	35.388	49.473	1.27814	.159	.230	702.
240.	1.73008	75.23	.200	36.203	50.619	1.28297	.158	.229	710.
245.	1.76975	77.13	.195	37.015	51.762	1.28768	.158	.228	718.
250.	1.80927	79.00	.190	37.825	52.901	1.29228	.158	.228	726.
255.	1.84865	80.87	.186	38.632	54.037	1.29678	.158	.227	734.
260.	1.88792	82.73	.182	39.438	55.170	1.30118	.158	.226	742.
265.	1.92708	84.58	.178	40.242	56.300	1.30549	.157	.226	750.
270.	1.96613	86.41	.174	41.045	57.428	1.30970	.157	.225	757.
275.	2.00510	88.24	.171	41.846	58.554	1.31384	.157	.225	765.
280.	2.04397	90.06	.167	42.646	59.678	1.31788	.157	.225	772.
285.	2.08277	91.88	.164	43.444	60.800	1.32186	.157	.224	780.
290.	2.12149	93.68	.161	44.242	61.920	1.32575	.157	.224	787.
295.	2.16014	95.49	.158	45.038	63.038	1.32957	.157	.224	794.
300.	2.19872	97.28	.155	45.833	64.155	1.33333	.157	.223	801.
310.	2.27572	100.86	.150	47.421	66.384	1.34064	.157	.223	815.
320.	2.35251	104.41	.145	49.006	68.609	1.34770	.156	.222	829.
330.	2.42911	107.95	.140	50.588	70.830	1.35454	.156	.222	842.
340.	2.50555	111.48	.136	52.168	73.046	1.36115	.156	.222	855.
350.	2.58184	114.99	.131	53.746	75.260	1.36757	.156	.221	868.
360.	2.65801	118.49	.128	55.322	77.471	1.37380	.156	.221	881.
370.	2.73406	121.98	.124	56.897	79.679	1.37985	.156	.221	894.
380.	2.81000	125.46	.121	58.470	81.885	1.38573	.156	.221	906.
390.	2.88585	128.93	.117	60.043	84.090	1.39146	.156	.220	918.
400.	2.96162	132.40	.114	61.614	86.293	1.39704	.156	.220	930.
410.	3.03731	135.86	.111	63.185	88.495	1.40247	.156	.220	942.
420.	3.11293	139.31	.109	64.756	90.695	1.40778	.156	.220	954.
430.	3.18849	142.75	.106	66.326	92.896	1.41295	.156	.220	965.
440.	3.26399	146.19	.104	67.897	95.095	1.41801	.156	.220	976.
450.	3.33944	149.63	.101	69.467	97.294	1.42295	.156	.220	988.
460.	3.41484	153.06	.099	71.038	99.494	1.42778	.156	.220	999.
470.	3.49019	156.49	.097	72.610	101.693	1.43251	.156	.220	1009.
480.	3.56550	159.91	.095	74.182	103.892	1.43715	.157	.220	1020.
490.	3.64078	163.33	.093	75.755	106.092	1.44168	.157	.220	1031.
500.	3.71602	166.75	.091	77.328	108.293	1.44613	.157	.220	1041.
510.	3.79122	170.17	.089	78.903	110.495	1.45049	.157	.220	1052.
520.	3.86640	173.58	.087	80.479	112.697	1.45476	.157	.220	1062.
530.	3.94155	176.99	.086	82.057	114.901	1.45896	.157	.220	1072.
540.	4.01667	180.40	.084	83.636	117.106	1.46308	.158	.221	1082.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

50. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 97.918	.01226	2023.81	320.07	-83.203	-83.089	.50136	.260	.398	3788.
100.	.01231	1990.32	313.39	-82.375	-82.261	.50973	.259	.398	3760.
105.	.01243	1910.48	298.51	-80.387	-80.272	.52913	.258	.398	3696.
110.	.01255	1831.34	284.97	-78.400	-78.284	.54763	.256	.398	3634.
115.	.01267	1752.82	272.48	-76.413	-76.295	.56531	.253	.398	3573.
120.	.01280	1674.91	260.83	-74.424	-74.306	.58225	.250	.398	3514.
125.	.01293	1597.62	249.86	-72.435	-72.315	.59850	.247	.398	3454.
130.	.01306	1521.00	239.44	-70.444	-70.323	.61412	.244	.399	3394.
135.	.01319	1445.10	229.47	-68.451	-68.329	.62917	.240	.399	3333.
140.	.01333	1370.01	219.89	-66.455	-66.332	.64370	.237	.400	3272.
145.	.01348	1295.82	210.63	-64.456	-64.331	.65774	.234	.401	3209.
150.	.01363	1222.62	201.63	-62.452	-62.325	.67134	.230	.402	3145.
155.	.01379	1150.53	192.86	-60.442	-60.314	.68452	.226	.403	3079.
160.	.01395	1079.64	184.29	-58.425	-58.298	.69734	.223	.404	3012.
165.	.01412	1010.08	175.89	-56.401	-56.270	.70980	.220	.406	2942.
170.	.01430	941.94	167.63	-54.367	-54.234	.72196	.216	.408	2870.
175.	.01448	875.36	159.50	-52.321	-52.187	.73383	.213	.411	2795.
180.	.01468	810.44	151.48	-50.262	-50.126	.74544	.210	.414	2717.
185.	.01489	747.28	143.58	-48.186	-48.048	.75683	.208	.417	2636.
* 186.911	.01496	724.85	140.74	-47.430	-47.291	.76090	.207	.419	2606.
* 186.811	1.15324	52.66	.313	27.128	37.805	1.21627	.164	.250	609.
190.	1.17833	54.09	.305	27.689	38.598	1.22049	.164	.248	616.
195.	1.21721	56.32	.294	28.559	39.829	1.22689	.163	.245	626.
200.	1.25559	58.49	.283	29.420	41.045	1.23304	.162	.242	636.
205.	1.29354	60.61	.274	30.273	42.250	1.23899	.161	.240	646.
210.	1.33113	62.70	.265	31.119	43.444	1.24475	.161	.238	655.
215.	1.36839	64.75	.257	31.960	44.629	1.25033	.160	.236	665.
220.	1.40537	66.77	.249	32.795	45.806	1.25574	.160	.235	674.
225.	1.44210	68.77	.242	33.625	46.977	1.26100	.160	.233	683.
230.	1.47860	70.74	.236	34.451	48.141	1.26612	.159	.232	691.
235.	1.51490	72.70	.229	35.274	49.300	1.27110	.159	.231	700.
240.	1.55103	74.63	.224	36.094	50.454	1.27596	.159	.230	708.
245.	1.58699	76.55	.218	36.910	51.604	1.28070	.158	.229	717.
250.	1.62280	78.45	.213	37.724	52.749	1.28533	.158	.229	725.
255.	1.65848	80.35	.208	38.536	53.891	1.28985	.158	.228	733.
260.	1.69403	82.22	.203	39.345	55.030	1.29428	.158	.227	741.
265.	1.72948	84.09	.199	40.153	56.165	1.29860	.158	.227	749.
270.	1.76482	85.95	.195	40.958	57.298	1.30284	.158	.226	756.
275.	1.80006	87.79	.191	41.762	58.429	1.30699	.157	.226	764.
280.	1.83522	89.63	.187	42.565	59.557	1.31105	.157	.225	771.
285.	1.87030	91.46	.183	43.366	60.682	1.31504	.157	.225	779.
290.	1.90530	93.28	.180	44.166	61.806	1.31894	.157	.225	786.
295.	1.94023	95.10	.176	44.964	62.928	1.32278	.157	.224	793.
300.	1.97509	96.91	.173	45.762	64.049	1.32655	.157	.224	800.
310.	2.04465	100.51	.167	47.354	66.285	1.33388	.157	.223	814.
320.	2.11399	104.09	.161	48.942	68.515	1.34096	.157	.223	828.
330.	2.18314	107.65	.156	50.528	70.741	1.34781	.157	.222	842.
340.	2.25213	111.19	.151	52.111	72.962	1.35444	.156	.222	855.
350.	2.32098	114.72	.146	53.691	75.180	1.36087	.156	.222	868.
360.	2.38969	118.24	.142	55.270	77.395	1.36711	.156	.221	881.
370.	2.45829	121.74	.138	56.847	79.607	1.37317	.156	.221	893.
380.	2.52678	125.24	.134	58.422	81.817	1.37906	.156	.221	906.
390.	2.59518	128.73	.131	59.996	84.024	1.38480	.156	.221	918.
400.	2.66350	132.20	.127	61.570	86.230	1.39038	.156	.221	930.
410.	2.73174	135.67	.124	63.143	88.435	1.39582	.156	.220	942.
420.	2.79991	139.14	.121	64.715	90.638	1.40113	.156	.220	953.
430.	2.86802	142.59	.118	66.287	92.841	1.40632	.156	.220	965.
440.	2.93606	146.04	.115	67.858	95.042	1.41138	.156	.220	976.
450.	3.00406	149.49	.113	69.430	97.244	1.41633	.156	.220	987.
460.	3.07200	152.93	.110	71.002	99.445	1.42116	.156	.220	998.
470.	3.13990	156.36	.108	72.575	101.646	1.42590	.157	.220	1009.
480.	3.20776	159.80	.105	74.148	103.847	1.43053	.157	.220	1020.
490.	3.27559	163.22	.103	75.722	106.049	1.43507	.157	.220	1031.
500.	3.34337	166.65	.101	77.296	108.251	1.43952	.157	.220	1041.
510.	3.41113	170.07	.099	78.872	110.454	1.44388	.157	.220	1052.
520.	3.47885	173.49	.097	80.449	112.658	1.44816	.157	.220	1062.
530.	3.54654	176.90	.095	82.027	114.864	1.45236	.157	.221	1072.
540.	3.61421	180.32	.093	83.607	117.070	1.45649	.158	.221	1082.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

100. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	Cv BTU/LB-R	Cp BTU/LB-R	VELOCITY OF SOUND FT/S
* 97.989	.01225	2026.74	320.09	-83.196	-82.969	.50142	.260	.398	3790.
100.	.01230	1994.45	313.64	-82.397	-82.169	.50951	.260	.398	3763.
105.	.01242	1914.72	298.76	-80.411	-80.181	.52891	.258	.398	3699.
110.	.01254	1835.70	285.22	-78.425	-78.193	.54741	.256	.398	3637.
115.	.01267	1757.30	272.73	-76.439	-76.204	.56508	.253	.398	3577.
120.	.01279	1679.51	261.09	-74.453	-74.216	.58201	.250	.398	3517.
125.	.01292	1602.35	250.12	-72.465	-72.226	.59825	.247	.398	3457.
130.	.01305	1525.85	239.70	-70.476	-70.235	.61387	.244	.398	3398.
135.	.01319	1450.09	229.74	-68.486	-68.241	.62892	.241	.399	3337.
140.	.01333	1375.13	220.17	-66.492	-66.245	.64343	.237	.399	3276.
145.	.01347	1301.08	210.91	-64.495	-64.246	.65747	.234	.400	3214.
150.	.01362	1228.03	201.93	-62.494	-62.242	.67105	.230	.401	3150.
155.	.01378	1156.08	193.17	-60.487	-60.232	.68423	.227	.402	3084.
160.	.01394	1085.35	184.62	-58.474	-58.216	.69703	.223	.404	3017.
165.	.01411	1015.94	176.23	-56.454	-56.192	.70948	.220	.406	2948.
170.	.01429	947.98	167.99	-54.424	-54.159	.72162	.216	.408	2876.
175.	.01447	881.57	159.88	-52.383	-52.115	.73348	.213	.410	2802.
180.	.01467	816.82	151.88	-50.328	-50.057	.74507	.211	.413	2725.
185.	.01487	753.85	144.01	-48.259	-47.983	.75644	.208	.416	2644.
190.	.01509	692.74	136.24	-46.170	-45.891	.76760	.206	.421	2560.
195.	.01532	633.58	128.59	-44.060	-43.776	.77859	.204	.425	2472.
200.	.01557	576.43	121.06	-41.923	-41.635	.78943	.203	.431	2381.
* 204.422	.01580	527.60	114.52	-40.007	-39.714	.79893	.203	.437	2297.
* 204.422	.59735	50.99	.634	28.448	39.509	1.18638	.171	.277	619.
205.	.59991	51.28	.630	28.561	39.669	1.18717	.171	.277	620.
210.	.62174	53.99	.602	29.522	41.035	1.19376	.169	.270	632.
215.	.64303	56.58	.577	30.462	42.369	1.20004	.168	.264	643.
220.	.66389	59.09	.554	31.385	43.679	1.20606	.166	.260	654.
225.	.68439	61.51	.534	32.293	44.966	1.21184	.165	.256	664.
230.	.70456	63.87	.515	33.189	46.236	1.21742	.164	.252	674.
235.	.72446	66.17	.499	34.074	47.489	1.22282	.164	.249	684.
240.	.74412	68.43	.483	34.950	48.729	1.22804	.163	.247	693.
245.	.76357	70.64	.469	35.818	49.958	1.23310	.162	.245	702.
250.	.78283	72.81	.456	36.679	51.175	1.23802	.162	.243	711.
255.	.80193	74.95	.443	37.534	52.384	1.24281	.161	.241	720.
260.	.82088	77.06	.432	38.383	53.584	1.24747	.161	.239	729.
265.	.83969	79.14	.421	39.228	54.776	1.25201	.160	.238	737.
270.	.85838	81.20	.411	40.067	55.962	1.25645	.160	.237	746.
275.	.87696	83.24	.401	40.903	57.142	1.26078	.160	.235	754.
280.	.89544	85.25	.392	41.735	58.317	1.26501	.159	.234	762.
285.	.91383	87.25	.383	42.564	59.486	1.26915	.159	.233	770.
290.	.93213	89.23	.375	43.390	60.651	1.27320	.159	.233	778.
295.	.95035	91.19	.367	44.213	61.811	1.27717	.159	.232	785.
300.	.96850	93.14	.360	45.034	62.968	1.28105	.159	.231	793.
310.	1.00461	97.01	.346	46.668	65.271	1.28861	.158	.230	808.
320.	1.04049	100.82	.333	48.294	67.561	1.29588	.158	.229	822.
330.	1.07617	104.60	.321	49.914	69.842	1.30289	.158	.228	836.
340.	1.11167	108.34	.311	51.527	72.113	1.30967	.157	.227	850.
350.	1.14701	112.06	.300	53.136	74.376	1.31623	.157	.226	864.
360.	1.18222	115.74	.291	54.740	76.632	1.32259	.157	.225	877.
370.	1.21731	119.40	.282	56.340	78.882	1.32875	.157	.225	890.
380.	1.25229	123.04	.274	57.937	81.126	1.33474	.157	.224	903.
390.	1.28717	126.66	.266	59.531	83.366	1.34056	.157	.224	915.
400.	1.32196	130.27	.259	61.123	85.602	1.34622	.157	.223	927.
410.	1.35667	133.85	.252	62.713	87.835	1.35173	.157	.223	940.
420.	1.39131	137.43	.246	64.301	90.064	1.35710	.157	.223	952.
430.	1.42589	140.99	.240	65.887	92.291	1.36234	.157	.223	963.
440.	1.46041	144.54	.234	67.472	94.515	1.36746	.157	.222	975.
450.	1.49487	148.07	.228	69.057	96.738	1.37245	.157	.222	986.
460.	1.52928	151.60	.223	70.641	98.959	1.37733	.157	.222	997.
470.	1.56365	155.12	.218	72.224	101.179	1.38211	.157	.222	1009.
480.	1.59797	158.63	.213	73.807	103.397	1.38678	.157	.222	1019.
490.	1.63226	162.13	.209	75.391	105.616	1.39135	.157	.222	1030.
500.	1.66651	165.63	.204	76.975	107.834	1.39583	.157	.222	1041.
510.	1.70072	169.12	.200	78.559	110.052	1.40023	.157	.222	1051.
520.	1.73491	172.60	.196	80.144	112.270	1.40453	.157	.222	1062.
530.	1.76907	176.08	.192	81.730	114.488	1.40876	.158	.222	1072.
540.	1.80320	179.55	.188	83.317	116.707	1.41291	.158	.222	1082.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

150. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 98.060	.01225	2029.67	320.10	-83.189	-82.849	.50149	.260	.398	3792.
100.	.01230	1998.57	313.89	-82.419	-82.077	.50929	.260	.398	3766.
105.	.01242	1916.96	299.01	-80.434	-80.089	.52869	.258	.398	3702.
110.	.01254	1840.05	285.47	-78.450	-78.101	.54718	.256	.398	3640.
115.	.01266	1767.78	272.99	-76.465	-76.114	.56485	.253	.398	3580.
120.	.01279	1684.11	261.34	-74.481	-74.126	.58177	.250	.398	3521.
125.	.01292	1607.07	250.37	-72.495	-72.137	.59801	.247	.398	3461.
130.	.01305	1530.70	239.96	-70.509	-70.146	.61362	.244	.398	3402.
135.	.01318	1455.06	230.01	-68.520	-68.154	.62866	.241	.399	3341.
140.	.01332	1380.24	220.45	-66.529	-66.159	.64317	.237	.399	3280.
145.	.01347	1306.33	211.20	-64.534	-64.160	.65720	.234	.400	3218.
150.	.01362	1233.42	202.22	-62.536	-62.158	.67077	.230	.401	3155.
155.	.01377	1161.62	193.48	-60.533	-60.150	.68394	.227	.402	3090.
160.	.01393	1091.04	184.94	-58.523	-58.136	.69672	.223	.403	3023.
165.	.01410	1021.79	176.57	-56.506	-56.114	.70917	.220	.405	2954.
170.	.01428	953.99	168.34	-54.480	-54.084	.72129	.217	.407	2883.
175.	.01446	887.75	160.25	-52.444	-52.042	.73313	.213	.409	2809.
180.	.01465	823.18	152.29	-50.395	-49.988	.74470	.211	.412	2732.
185.	.01486	760.38	144.43	-48.330	-47.918	.75605	.208	.416	2652.
190.	.01507	699.46	136.69	-46.248	-45.830	.76718	.206	.420	2569.
195.	.01530	640.50	129.07	-44.145	-43.720	.77815	.204	.424	2482.
200.	.01554	583.55	121.58	-42.016	-41.584	.78896	.203	.430	2391.
205.	.01581	528.66	114.24	-39.857	-39.418	.79966	.203	.437	2293.
210.	.01609	475.83	107.07	-37.661	-37.214	.81029	.202	.445	2201.
215.	.01639	424.98	100.11	-35.421	-34.966	.82087	.203	.455	2102.
* 216.364	.01648	411.44	98.25	-34.801	-34.343	.82376	.203	.458	2075.
* 216.364	.40152	48.16	.982	28.968	40.121	1.16785	.177	.306	621.
220.	.41330	50.44	.943	29.739	41.218	1.17290	.175	.298	631.
225.	.42899	53.48	.897	30.766	42.682	1.17948	.173	.288	643.
230.	.44420	56.37	.857	31.764	44.102	1.18572	.171	.280	655.
235.	.45901	59.13	.821	32.738	45.487	1.19168	.169	.274	666.
240.	.47349	61.79	.790	33.691	46.842	1.19738	.168	.268	677.
245.	.48768	64.36	.761	34.627	48.173	1.20287	.167	.264	687.
250.	.50163	66.86	.735	35.549	49.482	1.20816	.166	.260	697.
255.	.51537	69.30	.712	36.458	50.773	1.21327	.165	.257	707.
260.	.52892	71.68	.690	37.357	52.048	1.21822	.164	.254	716.
265.	.54231	74.01	.670	38.246	53.309	1.22303	.163	.251	726.
270.	.55555	76.30	.651	39.126	54.557	1.22770	.163	.249	735.
275.	.56866	78.54	.634	40.000	55.795	1.23224	.162	.246	744.
280.	.58166	80.76	.618	40.866	57.022	1.23666	.162	.245	752.
285.	.59455	82.94	.602	41.727	58.241	1.24098	.161	.243	761.
290.	.60734	85.09	.588	42.583	59.452	1.24519	.161	.241	769.
295.	.62004	87.22	.575	43.433	60.656	1.24930	.161	.240	777.
300.	.63266	89.32	.562	44.280	61.853	1.25333	.160	.239	785.
310.	.65769	93.46	.538	45.961	64.229	1.26112	.160	.237	801.
320.	.68247	97.53	.516	47.629	66.585	1.26860	.159	.235	816.
330.	.70703	101.54	.497	49.285	68.923	1.27579	.159	.233	831.
340.	.73140	105.49	.479	50.932	71.247	1.28273	.158	.232	845.
350.	.75561	109.39	.462	52.570	73.558	1.28943	.158	.230	859.
360.	.77967	113.25	.447	54.201	75.858	1.29591	.158	.229	873.
370.	.80361	117.07	.433	55.826	78.147	1.30218	.158	.229	886.
380.	.82743	120.86	.420	57.446	80.428	1.30826	.158	.228	900.
390.	.85115	124.61	.407	59.061	82.702	1.31417	.157	.227	912.
400.	.87478	128.34	.396	60.671	84.969	1.31991	.157	.226	925.
410.	.89833	132.05	.385	62.278	87.230	1.32549	.157	.226	938.
420.	.92180	135.74	.374	63.882	89.486	1.33093	.157	.225	950.
430.	.94520	139.40	.365	65.484	91.738	1.33623	.157	.225	962.
440.	.96855	143.05	.356	67.083	93.985	1.34139	.157	.225	974.
450.	.99184	146.68	.347	68.680	96.230	1.34644	.157	.224	985.
460.	1.01507	150.29	.339	70.276	98.471	1.35136	.157	.224	997.
470.	1.03826	153.89	.331	71.871	100.710	1.35618	.157	.224	1008.
480.	1.06141	157.48	.323	73.465	102.947	1.36089	.157	.224	1019.
490.	1.08452	161.06	.316	75.058	105.182	1.36550	.157	.223	1030.
500.	1.10759	164.63	.309	76.651	107.416	1.37001	.157	.223	1041.
510.	1.13063	168.18	.303	78.244	109.649	1.37443	.157	.223	1051.
520.	1.15364	171.73	.297	79.838	111.881	1.37877	.158	.223	1062.
530.	1.17662	175.27	.291	81.431	114.113	1.38302	.158	.223	1072.
540.	1.19957	178.80	.285	83.026	116.345	1.38719	.158	.223	1082.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

200. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 98.131	.01225	2032.60	320.11	-83.182	-82.729	.50156	.260	.398	3794.
100.	.01229	2002.68	314.13	-82.441	-81.985	.50907	.260	.398	3769.
105.	.01241	1923.19	299.25	-80.457	-79.998	.52846	.258	.398	3705.
110.	.01253	1844.40	285.72	-78.474	-78.010	.54695	.256	.397	3644.
115.	.01266	1766.24	273.23	-76.492	-76.023	.56462	.253	.397	3584.
120.	.01278	1688.70	261.59	-74.509	-74.035	.58154	.250	.398	3524.
125.	.01291	1611.78	250.63	-72.525	-72.047	.59777	.247	.398	3465.
130.	.01304	1535.53	240.23	-70.540	-70.057	.61338	.244	.398	3405.
135.	.01318	1460.03	230.28	-68.554	-68.066	.62841	.241	.398	3345.
140.	.01332	1385.34	220.72	-66.565	-66.072	.64291	.237	.399	3285.
145.	.01346	1311.56	211.48	-64.574	-64.075	.65692	.234	.400	3223.
150.	.01361	1238.79	202.52	-62.578	-62.074	.67049	.230	.401	3159.
155.	.01376	1167.14	193.79	-60.578	-60.068	.68365	.227	.402	3095.
160.	.01392	1096.71	185.26	-58.571	-58.056	.69642	.223	.403	3028.
165.	.01409	1027.62	176.90	-56.558	-56.036	.70885	.220	.405	2960.
170.	.01426	959.97	168.70	-54.536	-54.008	.72096	.217	.407	2889.
175.	.01445	893.90	160.63	-52.504	-51.969	.73278	.214	.409	2815.
180.	.01464	829.50	152.68	-50.460	-49.918	.74434	.211	.412	2739.
185.	.01484	766.89	144.86	-48.401	-47.852	.75566	.208	.415	2660.
190.	.01506	706.15	137.15	-46.326	-45.768	.76677	.206	.419	2577.
195.	.01528	647.37	129.56	-44.229	-43.663	.77771	.205	.423	2491.
200.	.01552	590.62	122.10	-42.108	-41.533	.78850	.203	.429	2401.
205.	.01578	535.94	114.79	-39.958	-39.374	.79917	.203	.435	2308.
210.	.01606	483.30	107.67	-37.773	-37.178	.80975	.203	.443	2213.
215.	.01636	432.66	100.75	-35.545	-34.939	.82029	.203	.453	2116.
220.	.01668	383.89	94.09	-33.265	-32.647	.83082	.203	.464	2018.
225.	.01704	336.75	87.75	-30.920	-30.289	.84142	.202	.479	1922.
* 225.695	.01710	330.30	86.90	-30.588	-29.955	.84290	.202	.481	1910.
* 225.695	.30002	44.87	1.36	29.111	40.223	1.15381	.183	.338	620.
230.	.31151	47.96	1.29	30.107	41.644	1.16007	.180	.323	632.
235.	.32427	51.38	1.22	31.213	43.222	1.16686	.177	.309	646.
240.	.33852	54.58	1.16	32.277	44.746	1.17325	.174	.298	658.
245.	.34837	57.63	1.11	33.308	46.209	1.17931	.172	.290	670.
250.	.35989	60.54	1.06	34.310	47.639	1.18508	.170	.282	682.
255.	.37113	63.34	1.02	35.291	49.035	1.19061	.169	.276	693.
260.	.38213	66.04	.985	36.251	50.403	1.19593	.168	.271	703.
265.	.39292	68.66	.952	37.196	51.748	1.20105	.167	.267	713.
270.	.40354	71.21	.921	38.126	53.071	1.20600	.166	.263	723.
275.	.41400	73.70	.893	39.044	54.377	1.21079	.165	.259	733.
280.	.42432	76.14	.867	39.952	55.667	1.21544	.164	.256	742.
285.	.43452	78.52	.843	40.850	56.942	1.21995	.164	.254	751.
290.	.44461	80.86	.821	41.740	58.206	1.22434	.163	.251	760.
295.	.45459	83.17	.800	42.622	59.458	1.22863	.162	.249	769.
300.	.46449	85.44	.780	43.497	60.699	1.23280	.162	.247	778.
310.	.48404	89.88	.744	45.231	63.157	1.24086	.161	.244	794.
320.	.50332	94.21	.712	46.944	65.584	1.24856	.161	.241	810.
330.	.52235	98.46	.683	48.640	67.986	1.25595	.160	.239	826.
340.	.54119	102.62	.657	50.323	70.366	1.26306	.160	.237	841.
350.	.55985	106.72	.633	51.993	72.727	1.26990	.159	.235	855.
360.	.57836	110.76	.611	53.653	75.072	1.27651	.159	.234	869.
370.	.59673	114.74	.590	55.304	77.404	1.28290	.158	.233	883.
380.	.61499	118.68	.571	56.947	79.723	1.28908	.158	.231	897.
390.	.63314	122.58	.553	58.584	82.032	1.29508	.158	.230	910.
400.	.65119	126.44	.537	60.214	84.331	1.30090	.158	.229	923.
410.	.66916	130.27	.522	61.839	86.622	1.30656	.158	.229	936.
420.	.68706	134.07	.507	63.460	88.905	1.31206	.158	.228	948.
430.	.70488	137.84	.494	65.077	91.182	1.31742	.157	.227	960.
440.	.72264	141.58	.481	66.691	93.454	1.32264	.157	.227	972.
450.	.74035	145.31	.469	68.302	95.720	1.32773	.157	.226	984.
460.	.75800	149.01	.457	69.910	97.982	1.33271	.157	.226	996.
470.	.77560	152.69	.446	71.516	100.240	1.33756	.157	.226	1007.
480.	.79316	156.36	.436	73.121	102.496	1.34231	.157	.225	1018.
490.	.81068	160.01	.426	74.725	104.748	1.34695	.157	.225	1030.
500.	.82817	163.65	.417	76.327	106.998	1.35150	.158	.225	1040.
510.	.84562	167.27	.408	77.929	109.246	1.35595	.158	.225	1051.
520.	.86304	170.88	.399	79.530	111.493	1.36031	.158	.225	1062.
530.	.88042	174.48	.391	81.132	113.738	1.36459	.158	.225	1072.
540.	.89779	178.07	.383	82.734	115.983	1.36879	.158	.224	1083.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

250. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 98.202	.01225	2035.52	320.13	-83.175	-82.608	.50163	.260	.399	3795.
100.	.01229	2006.79	314.38	-82.463	-81.894	.50885	.260	.398	3772.
105.	.01241	1927.41	299.50	-80.480	-79.906	.52824	.258	.397	3708.
110.	.01253	1848.74	285.96	-78.499	-77.919	.54673	.256	.397	3647.
115.	.01265	1770.70	273.48	-76.518	-75.932	.56439	.253	.397	3587.
120.	.01278	1693.27	261.85	-74.537	-73.945	.58131	.251	.397	3528.
125.	.01291	1616.48	250.89	-72.555	-71.957	.59753	.247	.398	3469.
130.	.01304	1540.36	240.49	-70.572	-69.969	.61313	.244	.398	3409.
135.	.01317	1464.98	230.55	-68.588	-67.978	.62816	.241	.398	3350.
140.	.01331	1390.43	221.00	-66.602	-65.985	.64265	.237	.399	3289.
145.	.01345	1316.78	211.77	-64.612	-63.990	.65665	.234	.399	3227.
150.	.01360	1244.15	202.81	-62.620	-61.990	.67021	.230	.400	3164.
155.	.01375	1172.64	194.09	-60.622	-59.986	.68335	.227	.401	3100.
160.	.01391	1102.36	185.59	-58.619	-57.975	.69612	.223	.403	3034.
165.	.01408	1033.42	177.24	-56.610	-55.958	.70853	.220	.404	2965.
170.	.01425	965.94	169.05	-54.592	-53.932	.72063	.217	.406	2895.
175.	.01444	900.03	161.00	-52.564	-51.896	.73243	.214	.408	2822.
180.	.01463	835.80	153.08	-50.525	-49.848	.74397	.211	.411	2746.
185.	.01483	773.36	145.28	-48.472	-47.785	.75527	.209	.414	2667.
190.	.01504	712.80	137.59	-46.402	-45.706	.76637	.206	.419	2585.
195.	.01527	654.21	130.03	-44.312	-43.606	.77728	.205	.422	2500.
200.	.01550	597.65	122.61	-42.199	-41.481	.78804	.204	.428	2411.
205.	.01576	543.15	115.34	-40.058	-39.328	.79868	.203	.434	2319.
210.	.01603	490.72	108.25	-37.883	-37.140	.80922	.203	.441	2225.
215.	.01633	440.28	101.38	-35.667	-34.911	.81971	.203	.451	2129.
220.	.01665	391.71	94.76	-33.401	-32.630	.83020	.203	.462	2033.
225.	.01700	344.77	88.47	-31.074	-30.287	.84073	.202	.475	1939.
230.	.01739	299.10	82.57	-28.670	-27.865	.85137	.199	.493	1851.
* 233.474	.01770	271.61	79.64	-26.942	-26.123	.85889	.200	.516	1804.
* 233.474	.23737	41.27	1.78	29.013	40.002	1.14212	.188	.374	617.
235.	.24103	42.58	1.74	29.408	40.566	1.14453	.186	.366	622.
240.	.25249	46.59	1.63	30.646	42.334	1.15198	.182	.343	637.
245.	.26332	50.28	1.53	31.815	44.005	1.15886	.179	.326	651.
250.	.27367	53.73	1.45	32.931	45.600	1.16531	.176	.313	665.
255.	.28362	56.99	1.39	34.007	47.137	1.17140	.174	.302	677.
260.	.29326	60.09	1.33	35.049	48.625	1.17718	.172	.293	689.
265.	.30263	63.06	1.27	36.064	50.074	1.18270	.171	.286	700.
270.	.31177	65.92	1.23	37.056	51.489	1.18799	.169	.280	711.
275.	.32073	68.69	1.18	38.029	52.877	1.19308	.168	.275	722.
280.	.32952	71.37	1.15	38.985	54.240	1.19799	.167	.270	732.
285.	.33816	73.99	1.11	39.927	55.582	1.20274	.166	.266	742.
290.	.34667	76.54	1.08	40.857	56.905	1.20735	.165	.263	751.
295.	.35507	79.04	1.05	41.775	58.212	1.21181	.165	.260	761.
300.	.36336	81.48	1.02	42.683	59.505	1.21616	.164	.257	770.
310.	.37968	86.25	.967	44.475	62.052	1.22451	.163	.252	787.
320.	.39570	90.87	.921	46.239	64.557	1.23246	.162	.249	804.
330.	.41146	95.36	.881	47.979	67.027	1.24006	.161	.245	820.
340.	.42700	99.75	.845	49.700	69.467	1.24735	.161	.243	836.
350.	.44235	104.05	.812	51.404	71.882	1.25435	.160	.240	851.
360.	.45754	108.27	.782	53.095	74.276	1.26109	.160	.238	866.
370.	.47259	112.43	.754	54.773	76.651	1.26760	.159	.237	880.
380.	.48751	116.52	.729	56.441	79.010	1.27389	.159	.235	894.
390.	.50233	120.56	.705	58.100	81.355	1.27998	.159	.234	907.
400.	.51704	124.55	.684	59.752	83.687	1.28589	.158	.233	921.
410.	.53167	128.50	.663	61.396	86.009	1.29162	.158	.232	934.
420.	.54622	132.42	.644	63.034	88.321	1.29719	.158	.231	946.
430.	.56070	136.29	.626	64.667	90.624	1.30261	.158	.230	959.
440.	.57512	140.14	.609	66.296	92.920	1.30789	.158	.229	971.
450.	.58947	143.96	.594	67.920	95.209	1.31303	.158	.229	983.
460.	.60377	147.75	.579	69.541	97.492	1.31805	.158	.228	995.
470.	.61803	151.51	.565	71.160	99.770	1.32295	.158	.228	1007.
480.	.63224	155.26	.551	72.775	102.044	1.32774	.158	.227	1018.
490.	.64641	158.99	.538	74.389	104.313	1.33242	.158	.227	1029.
500.	.66054	162.69	.526	76.001	106.580	1.33700	.158	.226	1040.
510.	.67464	166.38	.515	77.612	108.843	1.34148	.158	.226	1051.
520.	.68870	170.06	.504	79.222	111.105	1.34587	.158	.226	1062.
530.	.70274	173.72	.493	80.832	113.364	1.35017	.158	.226	1073.
540.	.71675	177.37	.483	82.441	115.621	1.35439	.158	.226	1083.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

300. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 98.274	.01225	2038.45	320.14	-83.168	-82.488	.50170	.260	.398	3797.
100.	.01229	2010.89	314.62	-82.484	-81.802	.50863	.260	.398	3775.
105.	.01241	1931.63	299.75	-80.503	-79.814	.52802	.258	.397	3711.
110.	.01253	1853.07	286.21	-78.523	-77.828	.54650	.256	.397	3650.
115.	.01265	1775.15	273.73	-76.544	-75.841	.56416	.253	.397	3590.
120.	.01277	1697.84	262.10	-74.564	-73.855	.58107	.251	.397	3531.
125.	.01290	1621.17	251.14	-72.584	-71.868	.59729	.248	.397	3472.
130.	.01303	1545.18	240.75	-70.604	-69.880	.61289	.244	.398	3413.
135.	.01316	1469.93	230.82	-68.622	-67.890	.62790	.241	.398	3354.
140.	.01330	1395.50	221.27	-66.638	-65.899	.64239	.238	.399	3293.
145.	.01345	1321.99	212.05	-64.651	-63.904	.65639	.234	.399	3232.
150.	.01359	1249.50	203.11	-62.661	-61.906	.66993	.231	.400	3169.
155.	.01375	1178.13	194.40	-60.667	-59.903	.68307	.227	.401	3105.
160.	.01390	1107.99	185.90	-58.667	-57.895	.69582	.224	.402	3039.
165.	.01407	1039.21	177.57	-56.661	-55.879	.70822	.220	.404	2971.
170.	.01424	971.88	169.40	-54.647	-53.856	.72030	.217	.406	2901.
175.	.01442	906.13	161.37	-52.624	-51.823	.73209	.214	.408	2828.
180.	.01461	842.07	153.47	-50.590	-49.778	.74361	.211	.410	2753.
185.	.01481	779.79	145.69	-48.542	-47.719	.75489	.209	.413	2675.
190.	.01502	719.41	138.03	-46.478	-45.643	.76597	.207	.417	2593.
195.	.01525	661.00	130.51	-44.395	-43.548	.77685	.205	.421	2509.
200.	.01548	604.63	123.11	-42.289	-41.429	.78759	.204	.426	2421.
205.	.01574	550.32	115.88	-40.156	-39.282	.79819	.203	.433	2330.
210.	.01601	498.08	108.83	-37.991	-37.102	.80870	.203	.440	2237.
215.	.01630	447.83	101.99	-35.786	-34.881	.81915	.203	.449	2142.
220.	.01661	399.46	95.42	-33.535	-32.612	.82958	.203	.459	2047.
225.	.01696	352.72	89.17	-31.225	-30.283	.84005	.202	.472	1954.
230.	.01734	307.25	83.31	-28.843	-27.880	.85060	.199	.489	1869.
235.	.01778	264.97	77.93	-26.359	-25.371	.86140	.199	.514	1782.
240.	.01829	218.33	71.07	-23.729	-22.713	.87259	.197	.541	1668.
* 240.206	.01832	216.51	71.04	-23.618	-22.600	.87306	.197	.544	1667.
* 240.206	.19453	37.56	2.23	28.731	39.538	1.13177	.193	.417	613.
245.	.20486	42.05	2.07	30.068	41.448	1.13964	.188	.382	629.
250.	.21484	46.26	1.94	31.357	43.292	1.14709	.184	.357	645.
255.	.22423	50.13	1.82	32.569	45.025	1.15396	.180	.338	660.
260.	.23317	53.74	1.73	33.723	46.675	1.16037	.177	.323	673.
265.	.24175	57.15	1.65	34.830	48.260	1.16640	.175	.311	686.
270.	.25003	60.38	1.58	35.901	49.791	1.17213	.173	.302	698.
275.	.25808	63.47	1.51	36.942	51.279	1.17759	.171	.294	710.
280.	.26592	66.45	1.46	37.958	52.730	1.18282	.170	.287	721.
285.	.27359	69.32	1.41	38.952	54.150	1.18785	.169	.281	732.
290.	.28110	72.11	1.36	39.928	55.544	1.19269	.168	.276	742.
295.	.28848	74.82	1.32	40.888	56.914	1.19738	.167	.272	752.
300.	.29574	77.46	1.28	41.834	58.264	1.20191	.166	.268	762.
310.	.30997	82.57	1.21	43.692	60.911	1.21060	.164	.262	780.
320.	.32385	87.49	1.15	45.511	63.502	1.21882	.163	.257	798.
330.	.33745	92.25	1.09	47.300	66.045	1.22665	.162	.252	815.
340.	.35081	96.88	1.04	49.062	68.550	1.23413	.162	.249	831.
350.	.36397	101.39	1.00	50.803	71.023	1.24129	.161	.246	847.
360.	.37697	105.80	.962	52.526	73.467	1.24818	.160	.243	862.
370.	.38981	110.13	.926	54.234	75.888	1.25481	.160	.241	877.
380.	.40252	114.38	.893	55.928	78.289	1.26122	.160	.239	891.
390.	.41512	118.56	.863	57.611	80.672	1.26740	.159	.237	905.
400.	.42762	122.69	.835	59.284	83.039	1.27340	.159	.236	919.
410.	.44002	126.76	.809	60.948	85.392	1.27921	.159	.235	932.
420.	.45235	130.79	.785	62.604	87.733	1.28485	.158	.234	945.
430.	.46460	134.77	.763	64.254	90.063	1.29033	.158	.233	958.
440.	.47676	138.72	.742	65.897	92.384	1.29567	.158	.232	970.
450.	.48891	142.63	.722	67.536	94.696	1.30086	.158	.231	982.
460.	.50098	146.51	.703	69.170	97.001	1.30593	.158	.230	994.
470.	.51300	150.36	.686	70.801	99.299	1.31087	.158	.230	1006.
480.	.52498	154.18	.669	72.428	101.591	1.31570	.158	.229	1018.
490.	.53691	157.98	.653	74.052	103.879	1.32041	.158	.229	1029.
500.	.54881	161.76	.638	75.674	106.162	1.32503	.158	.228	1040.
510.	.56067	165.52	.624	77.294	108.441	1.32954	.158	.228	1051.
520.	.57250	169.26	.610	78.913	110.717	1.33396	.158	.227	1062.
530.	.58430	172.98	.597	80.531	112.990	1.33829	.158	.227	1073.
540.	.59607	176.69	.585	82.147	115.261	1.34253	.158	.227	1084.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

350. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 98.345	.01224	2041.37	320.16	-83.161	-82.368	.50177	.251	.398	3799.
100.	.01228	2014.99	314.87	-82.506	-81.710	.50841	.250	.398	3777.
105.	.01240	1935.84	299.99	-80.526	-79.723	.52780	.258	.397	3714.
110.	.01252	1857.40	286.46	-78.548	-77.736	.54628	.256	.397	3653.
115.	.01264	1779.59	273.98	-76.570	-75.750	.56394	.254	.397	3594.
120.	.01277	1702.41	262.35	-74.592	-73.765	.58084	.251	.397	3535.
125.	.01289	1625.85	251.40	-72.614	-71.778	.59706	.248	.397	3476.
130.	.01302	1549.98	241.01	-70.635	-69.791	.61264	.244	.398	3417.
135.	.01316	1474.86	231.08	-68.655	-67.802	.62765	.241	.398	3358.
140.	.01330	1400.56	221.54	-66.674	-65.812	.64213	.238	.398	3297.
145.	.01344	1327.19	212.33	-64.689	-63.819	.65612	.234	.399	3236.
150.	.01359	1254.83	203.40	-62.702	-61.822	.66965	.231	.400	3174.
155.	.01374	1183.60	194.70	-60.711	-59.821	.68278	.227	.401	3110.
160.	.01390	1113.61	186.21	-58.715	-57.814	.69552	.224	.402	3044.
165.	.01406	1044.97	177.90	-56.712	-55.801	.70791	.220	.403	2977.
170.	.01423	977.80	169.75	-54.702	-53.780	.71997	.217	.405	2907.
175.	.01441	912.21	161.74	-52.683	-51.749	.73175	.214	.407	2835.
180.	.01460	848.31	153.86	-50.653	-49.707	.74325	.211	.410	2760.
185.	.01480	786.20	146.10	-48.611	-47.652	.75452	.209	.413	2682.
190.	.01501	725.99	138.47	-46.553	-45.580	.76557	.207	.416	2602.
195.	.01523	667.76	130.97	-44.476	-43.489	.77643	.205	.420	2518.
200.	.01546	611.56	123.61	-42.378	-41.375	.78714	.204	.425	2430.
205.	.01571	557.44	116.41	-40.253	-39.235	.79771	.203	.431	2340.
210.	.01598	505.38	109.40	-38.097	-37.062	.80818	.203	.438	2248.
215.	.01627	455.32	102.60	-35.904	-34.850	.81859	.203	.447	2154.
220.	.01658	407.14	96.07	-33.666	-32.591	.82898	.203	.457	2061.
225.	.01692	360.59	89.86	-31.373	-30.276	.83938	.202	.469	1970.
230.	.01730	315.31	84.04	-29.012	-27.891	.84985	.199	.484	1886.
235.	.01772	273.54	78.49	-26.555	-25.406	.86055	.199	.507	1797.
240.	.01822	226.82	72.08	-23.963	-22.782	.87160	.197	.534	1690.
245.	.01880	180.77	64.93	-21.227	-20.009	.88314	.196	.570	1559.
* 246.174	.01896	170.08	63.15	-20.555	-19.326	.88581	.197	.581	1525.
* 246.174	.16317	33.72	2.74	28.289	38.864	1.12222	.198	.469	608.
250.	.17109	37.81	2.56	29.487	40.574	1.12911	.193	.428	623.
255.	.18053	42.58	2.37	30.913	42.614	1.13719	.188	.390	640.
260.	.18928	46.88	2.21	32.229	44.498	1.14450	.184	.364	656.
265.	.19751	50.84	2.09	33.465	46.265	1.15124	.180	.344	671.
270.	.20534	54.54	1.98	34.640	47.948	1.15753	.177	.329	685.
275.	.21285	58.02	1.89	35.768	49.563	1.16346	.175	.317	697.
280.	.22010	61.33	1.81	36.857	51.122	1.16908	.173	.307	710.
285.	.22714	64.51	1.74	37.915	52.636	1.17444	.172	.299	721.
290.	.23400	67.56	1.67	38.947	54.112	1.17957	.170	.292	732.
295.	.24069	70.51	1.61	39.956	55.556	1.18451	.169	.286	743.
300.	.24725	73.36	1.56	40.946	56.971	1.18926	.168	.281	753.
310.	.26003	78.85	1.47	42.879	59.732	1.19832	.166	.272	773.
320.	.27242	84.09	1.39	44.760	62.416	1.20684	.165	.265	792.
330.	.28451	89.13	1.32	46.601	65.040	1.21492	.164	.260	810.
340.	.29634	94.00	1.25	48.409	67.615	1.22260	.163	.255	827.
350.	.30796	98.73	1.20	50.189	70.148	1.22995	.162	.252	843.
360.	.31939	103.33	1.15	51.947	72.647	1.23699	.161	.248	859.
370.	.33067	107.84	1.11	53.685	75.116	1.24375	.161	.246	874.
380.	.34181	112.25	1.06	55.407	77.560	1.25027	.160	.243	888.
390.	.35283	116.58	1.03	57.115	79.982	1.25656	.160	.241	903.
400.	.36375	120.84	.992	58.810	82.385	1.26264	.160	.239	917.
410.	.37457	125.04	.961	60.495	84.771	1.26853	.159	.238	930.
420.	.38530	129.19	.931	62.173	87.142	1.27425	.159	.236	943.
430.	.39597	133.28	.903	63.837	89.499	1.27980	.159	.235	956.
440.	.40656	137.32	.878	65.496	91.846	1.28519	.159	.234	969.
450.	.41709	141.33	.853	67.150	94.182	1.29044	.158	.233	982.
460.	.42757	145.30	.831	68.797	96.508	1.29555	.158	.232	994.
470.	.43800	149.23	.809	70.440	98.827	1.30054	.158	.231	1006.
480.	.44838	153.13	.789	72.079	101.139	1.30541	.158	.231	1018.
490.	.45872	157.01	.770	73.714	103.444	1.31016	.158	.230	1029.
500.	.46902	160.86	.752	75.346	105.744	1.31481	.158	.230	1040.
510.	.47929	164.68	.735	76.976	108.039	1.31935	.158	.229	1052.
520.	.48952	168.48	.718	78.603	110.329	1.32380	.158	.229	1063.
530.	.49973	172.26	.703	80.229	112.616	1.32815	.158	.229	1074.
540.	.50990	176.03	.688	81.853	114.900	1.33242	.158	.228	1084.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

400. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	Cv BTU/LB-R	Cp BTU/LB-R	VELOCITY OF SOUND FT/S
* 98.416	.01224	2044.29	320.17	-83.154	-82.248	.50184	.261	.398	3801.
100.	.01228	2019.08	315.11	-82.527	-81.618	.50819	.260	.398	3780.
105.	.01240	1940.05	300.24	-80.549	-79.631	.52758	.258	.397	3717.
110.	.01252	1861.72	286.70	-78.572	-77.645	.54606	.256	.397	3656.
115.	.01264	1784.03	274.23	-76.596	-75.660	.56371	.254	.397	3597.
120.	.01276	1706.96	262.60	-74.620	-73.674	.58061	.251	.397	3538.
125.	.01289	1630.53	251.65	-72.643	-71.689	.59682	.248	.397	3480.
130.	.01302	1554.78	241.27	-70.667	-69.702	.61240	.245	.397	3421.
135.	.01315	1479.78	231.35	-68.689	-67.715	.62740	.241	.398	3362.
140.	.01329	1405.61	221.81	-66.709	-65.725	.64187	.238	.398	3302.
145.	.01343	1332.37	212.61	-64.728	-63.733	.65585	.234	.399	3241.
150.	.01358	1260.15	203.69	-62.743	-61.737	.66938	.231	.399	3179.
155.	.01373	1189.06	195.00	-60.755	-59.738	.68249	.227	.400	3115.
160.	.01389	1119.21	186.53	-58.762	-57.733	.69522	.224	.401	3050.
165.	.01405	1050.72	178.23	-56.763	-55.722	.70760	.220	.403	2982.
170.	.01422	983.69	170.09	-54.757	-53.703	.71965	.217	.405	2913.
175.	.01440	918.26	162.10	-52.742	-51.675	.73141	.214	.407	2841.
180.	.01459	854.52	154.24	-50.717	-49.636	.74289	.211	.409	2767.
185.	.01479	792.58	146.51	-48.679	-47.584	.75414	.209	.412	2690.
190.	.01499	732.54	138.91	-46.627	-45.516	.76517	.207	.415	2610.
195.	.01521	674.48	131.43	-44.557	-43.430	.77601	.205	.419	2526.
200.	.01545	618.45	124.11	-42.465	-41.321	.78669	.204	.424	2440.
205.	.01569	564.51	116.94	-40.349	-39.187	.79723	.203	.430	2351.
210.	.01596	512.63	109.96	-38.203	-37.021	.80768	.203	.437	2259.
215.	.01624	462.75	103.20	-36.020	-34.817	.81805	.203	.445	2167.
220.	.01655	414.75	96.70	-33.795	-32.569	.82838	.203	.454	2074.
225.	.01688	368.38	90.53	-31.517	-30.267	.83872	.202	.466	1985.
230.	.01725	323.30	84.75	-29.177	-27.899	.84912	.199	.480	1902.
235.	.01767	281.39	79.02	-26.744	-25.436	.85973	.199	.500	1810.
240.	.01815	235.23	73.02	-24.189	-22.845	.87064	.197	.528	1711.
245.	.01871	190.26	66.05	-21.502	-20.117	.88189	.196	.560	1586.
250.	.01939	144.33	59.09	-18.614	-17.178	.89376	.197	.618	1449.
* 251.555	.01964	130.52	56.78	-17.657	-16.203	.89765	.197	.641	1402.
* 251.555	.13902	29.74	3.31	27.691	37.988	1.11310	.204	.536	602.
255.	.14604	33.95	3.08	28.914	39.731	1.11998	.199	.480	618.
260.	.15517	39.29	2.82	30.494	41.987	1.12874	.191	.427	637.
265.	.16345	44.02	2.62	31.920	44.027	1.13651	.187	.391	654.
270.	.17115	48.31	2.46	33.240	45.917	1.14358	.183	.366	670.
275.	.17841	52.28	2.32	34.484	47.698	1.15012	.180	.347	684.
280.	.18533	56.00	2.21	35.668	49.395	1.15623	.177	.332	698.
285.	.19197	59.52	2.11	36.805	51.024	1.16200	.175	.320	710.
290.	.19840	62.88	2.02	37.904	52.599	1.16748	.173	.310	723.
295.	.20463	66.09	1.94	38.972	54.129	1.17271	.171	.302	734.
300.	.21070	69.19	1.87	40.014	55.620	1.17772	.170	.295	745.
310.	.22245	75.09	1.75	42.033	58.509	1.18719	.168	.283	766.
320.	.23377	80.67	1.64	43.984	61.299	1.19605	.166	.275	786.
330.	.24474	86.00	1.55	45.882	64.010	1.20440	.165	.268	804.
340.	.25545	91.12	1.48	47.739	66.660	1.21231	.164	.262	822.
350.	.26592	96.07	1.41	49.562	69.258	1.21984	.163	.259	839.
360.	.27619	100.88	1.35	51.357	71.814	1.22704	.162	.254	855.
370.	.28630	105.57	1.29	53.128	74.334	1.23394	.162	.250	871.
380.	.29627	110.14	1.24	54.879	76.823	1.24058	.161	.248	886.
390.	.30611	114.62	1.20	56.612	79.286	1.24698	.160	.245	901.
400.	.31585	119.02	1.16	58.331	81.726	1.25316	.160	.243	915.
410.	.32548	123.35	1.12	60.037	84.145	1.25913	.160	.241	929.
420.	.33503	127.61	1.08	61.732	86.547	1.26492	.159	.239	942.
430.	.34450	131.81	1.05	63.416	88.933	1.27053	.159	.238	955.
440.	.35391	135.95	1.02	65.092	91.306	1.27599	.159	.237	968.
450.	.36325	140.05	.988	66.760	93.666	1.28129	.159	.235	981.
460.	.37253	144.11	.961	68.422	96.015	1.28645	.159	.234	993.
470.	.38177	148.13	.936	70.078	98.355	1.29149	.158	.234	1006.
480.	.39095	152.11	.912	71.728	100.686	1.29639	.158	.233	1017.
490.	.40010	156.06	.889	73.374	103.009	1.30118	.158	.232	1029.
500.	.40920	159.97	.868	75.017	105.326	1.30586	.158	.231	1041.
510.	.41827	163.86	.848	76.656	107.637	1.31044	.158	.231	1052.
520.	.42731	167.73	.829	78.292	109.942	1.31492	.158	.230	1063.
530.	.43631	171.57	.810	79.926	112.243	1.31930	.158	.230	1074.
540.	.44529	175.39	.793	81.558	114.540	1.32359	.158	.230	1085.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

450. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 98.487	.01224	2047.21	320.18	-83.147	-82.128	.50191	.261	.398	3803.
100.	.01228	2023.17	315.36	-82.549	-81.526	.50797	.260	.397	3783.
105.	.01239	1964.25	300.48	-80.572	-79.539	.52736	.259	.397	3720.
110.	.01251	1866.03	286.95	-78.596	-77.554	.54583	.256	.397	3659.
115.	.01263	1788.46	274.48	-76.621	-75.569	.56348	.254	.397	3600.
120.	.01276	1711.50	262.85	-74.647	-73.584	.58038	.251	.397	3542.
125.	.01288	1635.19	251.91	-72.673	-71.599	.59658	.248	.397	3483.
130.	.01301	1559.56	241.52	-70.698	-69.613	.61216	.245	.397	3425.
135.	.01315	1484.69	231.61	-68.722	-67.627	.62715	.241	.397	3366.
140.	.01328	1410.65	222.09	-66.745	-65.638	.64161	.238	.398	3306.
145.	.01342	1337.53	212.89	-64.766	-63.647	.65558	.234	.398	3245.
150.	.01357	1265.45	203.98	-62.784	-61.653	.66910	.231	.399	3183.
155.	.01372	1194.49	195.30	-60.798	-59.655	.68220	.227	.400	3120.
160.	.01388	1124.79	186.84	-58.809	-57.652	.69492	.224	.401	3055.
165.	.01404	1056.44	178.56	-56.813	-55.643	.70729	.221	.402	2988.
170.	.01421	989.57	170.43	-54.811	-53.626	.71933	.217	.404	2919.
175.	.01439	924.29	162.46	-52.800	-51.601	.73107	.214	.406	2848.
180.	.01458	860.70	154.62	-50.780	-49.565	.74254	.212	.408	2774.
185.	.01477	798.93	146.91	-48.747	-47.516	.75377	.209	.411	2697.
190.	.01498	739.05	139.34	-46.700	-45.452	.76478	.207	.414	2618.
195.	.01520	681.15	131.89	-44.636	-43.370	.77560	.205	.418	2535.
200.	.01543	625.30	124.59	-42.552	-41.267	.78625	.204	.423	2449.
205.	.01567	571.53	117.46	-40.444	-39.138	.79677	.204	.429	2361.
210.	.01593	519.82	110.51	-38.306	-36.979	.80717	.203	.435	2270.
215.	.01621	470.12	103.79	-36.134	-34.783	.81751	.203	.443	2179.
220.	.01651	422.29	97.33	-33.921	-32.545	.82780	.203	.452	2087.
225.	.01684	376.11	91.19	-31.659	-30.256	.83808	.202	.463	1999.
230.	.01720	331.20	85.44	-29.338	-27.904	.84841	.199	.477	1918.
235.	.01761	289.19	79.54	-26.928	-25.460	.85893	.199	.494	1824.
240.	.01809	243.55	73.92	-24.407	-22.901	.86970	.197	.523	1731.
245.	.01862	199.52	67.12	-21.765	-20.214	.88079	.196	.551	1612.
250.	.01926	154.86	60.37	-18.949	-17.344	.89238	.196	.601	1481.
255.	.02009	111.71	52.83	-15.856	-14.182	.90490	.199	.674	1327.
* 256.467	.02034	99.17	51.22	-14.870	-13.172	.90885	.199	.721	1289.
* 256.467	.11967	25.64	3.97	26.928	36.900	1.10411	.209	.626	596.
260.	.12693	30.56	3.64	28.365	38.942	1.11202	.202	.538	614.
265.	.13584	36.47	3.30	30.112	41.431	1.12150	.194	.464	635.
270.	.14376	41.59	3.04	31.652	43.631	1.12973	.189	.419	653.
275.	.15103	46.19	2.84	33.057	45.642	1.13711	.185	.387	670.
280.	.15783	50.41	2.67	34.367	47.519	1.14387	.181	.364	685.
285.	.16427	54.34	2.53	35.606	49.294	1.15016	.178	.347	699.
290.	.17043	58.05	2.41	36.789	50.991	1.15606	.176	.332	712.
295.	.17635	61.56	2.31	37.928	52.623	1.16164	.174	.321	725.
300.	.18209	64.93	2.21	39.031	54.204	1.16695	.173	.311	737.
310.	.19309	71.27	2.05	41.149	57.239	1.17691	.170	.296	759.
320.	.20362	77.22	1.92	43.179	60.146	1.18614	.168	.285	780.
330.	.21376	82.86	1.81	45.142	62.954	1.19478	.166	.277	799.
340.	.22360	88.25	1.71	47.052	65.684	1.20293	.165	.270	818.
350.	.23319	93.43	1.63	48.921	68.352	1.21066	.164	.264	835.
360.	.24258	98.45	1.55	50.755	70.969	1.21804	.163	.259	852.
370.	.25179	103.32	1.49	52.561	73.542	1.22509	.162	.255	868.
380.	.26085	108.06	1.43	54.342	76.079	1.23185	.162	.252	883.
390.	.26978	112.69	1.37	56.103	78.584	1.23836	.161	.249	898.
400.	.27860	117.23	1.32	57.847	81.062	1.24463	.161	.247	913.
410.	.28732	121.68	1.28	59.575	83.516	1.25069	.160	.244	927.
420.	.29594	126.06	1.24	61.289	85.950	1.25656	.160	.242	941.
430.	.30449	130.36	1.20	62.992	88.365	1.26224	.160	.241	954.
440.	.31297	134.61	1.16	64.685	90.764	1.26776	.159	.239	968.
450.	.32138	138.81	1.13	66.369	93.149	1.27312	.159	.238	980.
460.	.32974	142.95	1.10	68.045	95.521	1.27833	.159	.237	993.
470.	.33804	147.05	1.07	69.713	97.882	1.28341	.159	.236	1005.
480.	.34630	151.11	1.04	71.376	100.233	1.28836	.159	.235	1017.
490.	.35451	155.13	1.01	73.033	102.574	1.29318	.159	.234	1029.
500.	.36269	159.12	.987	74.686	104.908	1.29790	.159	.233	1041.
510.	.37083	163.07	.963	76.335	107.235	1.30251	.159	.232	1052.
520.	.37893	167.00	.941	77.980	109.556	1.30701	.159	.232	1064.
530.	.38701	170.90	.920	79.623	111.871	1.31142	.159	.231	1075.
540.	.39505	174.78	.900	81.263	114.181	1.31574	.159	.231	1086.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

500. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 98.558	.01224	2050.13	320.20	-83.140	-82.007	.50198	.261	.398	3805.
100.	.01227	2027.25	315.60	-82.570	-81.434	.50776	.260	.397	3786.
105.	.01239	1948.44	300.73	-80.595	-79.448	.52714	.259	.397	3723.
110.	.01251	1870.34	287.19	-78.621	-77.462	.54561	.256	.397	3663.
115.	.01263	1792.88	274.72	-76.647	-75.478	.56325	.254	.397	3603.
120.	.01275	1716.04	263.10	-74.674	-73.494	.58014	.251	.397	3545.
125.	.01288	1639.85	252.16	-72.702	-71.509	.59634	.248	.397	3487.
130.	.01301	1564.34	241.78	-70.729	-69.524	.61191	.245	.397	3428.
135.	.01314	1489.59	231.87	-68.755	-67.538	.62690	.241	.397	3370.
140.	.01328	1415.67	222.36	-66.780	-65.551	.64136	.238	.398	3310.
145.	.01342	1342.69	213.17	-64.804	-63.561	.65532	.235	.398	3250.
150.	.01356	1270.73	204.26	-62.824	-61.569	.66883	.231	.399	3188.
155.	.01371	1199.92	195.60	-60.842	-59.572	.68192	.228	.400	3125.
160.	.01387	1130.35	187.15	-58.855	-57.571	.69463	.224	.401	3060.
165.	.01403	1062.15	178.88	-56.863	-55.564	.70698	.221	.402	2994.
170.	.01420	995.42	170.78	-54.864	-53.549	.71900	.218	.404	2925.
175.	.01438	930.29	162.82	-52.858	-51.527	.73073	.215	.405	2854.
180.	.01456	866.86	155.00	-50.842	-49.493	.74219	.212	.408	2781.
185.	.01476	805.24	147.32	-48.814	-47.448	.75340	.209	.410	2704.
190.	.01496	745.53	139.76	-46.773	-45.388	.76439	.207	.414	2625.
195.	.01518	687.80	132.34	-44.715	-43.310	.77518	.206	.418	2543.
200.	.01541	632.11	125.07	-42.638	-41.211	.78581	.204	.422	2458.
205.	.01565	578.50	117.97	-40.537	-39.088	.79630	.204	.427	2371.
210.	.01591	526.96	111.06	-38.408	-36.935	.80668	.203	.434	2281.
215.	.01618	477.43	104.37	-36.246	-34.748	.81697	.203	.441	2191.
220.	.01648	429.77	97.94	-34.045	-32.519	.82722	.203	.450	2101.
225.	.01680	383.76	91.84	-31.798	-30.242	.83745	.202	.461	2014.
230.	.01716	339.03	86.13	-29.495	-27.906	.84771	.199	.473	1934.
235.	.01756	296.93	80.07	-27.107	-25.481	.85815	.199	.489	1838.
240.	.01801	252.46	74.78	-24.618	-22.951	.86880	.197	.516	1751.
245.	.01853	208.58	68.14	-22.017	-20.301	.87973	.196	.543	1636.
250.	.01915	165.88	61.54	-19.264	-17.491	.89108	.196	.584	1513.
255.	.01992	123.16	54.39	-16.272	-14.428	.90321	.197	.647	1369.
260.	.02096	81.51	46.55	-12.881	-10.941	.91675	.202	.764	1195.
* 260.993	.02122	72.59	45.49	-12.129	-10.165	.91973	.203	.824	1167.
* 260.993	.10362	21.38	4.72	25.970	35.564	1.09496	.215	.757	590.
265.	.11207	27.73	4.21	27.864	38.240	1.10514	.205	.599	613.
270.	.12080	34.15	3.78	29.783	40.968	1.11534	.197	.502	635.
275.	.12841	39.63	3.47	31.436	43.325	1.12399	.191	.445	654.
280.	.13531	44.50	3.22	32.923	45.451	1.13166	.186	.408	672.
285.	.14172	48.94	3.02	34.297	47.418	1.13862	.183	.380	687.
290.	.14775	53.05	2.86	35.587	49.267	1.14505	.180	.360	702.
295.	.15350	56.92	2.72	36.814	51.025	1.15106	.177	.344	716.
300.	.15901	60.57	2.59	37.989	52.711	1.15673	.175	.331	728.
310.	.16949	67.41	2.39	40.224	55.917	1.16724	.172	.311	752.
320.	.17941	73.75	2.22	42.343	58.955	1.17689	.169	.297	774.
330.	.18892	79.71	2.08	44.378	61.869	1.18585	.168	.286	794.
340.	.19809	85.38	1.96	46.347	64.687	1.19427	.166	.278	813.
350.	.20699	90.80	1.86	48.265	67.429	1.20222	.165	.271	831.
360.	.21568	96.03	1.77	50.141	70.110	1.20977	.164	.265	849.
370.	.22417	101.09	1.69	51.984	72.740	1.21698	.163	.261	865.
380.	.23252	106.00	1.62	53.798	75.326	1.22387	.162	.257	881.
390.	.24072	110.78	1.56	55.588	77.875	1.23049	.162	.253	897.
400.	.24881	115.46	1.50	57.357	80.393	1.23687	.161	.250	911.
410.	.25679	120.04	1.44	59.108	82.883	1.24302	.161	.248	926.
420.	.26468	124.53	1.40	60.843	85.349	1.24896	.160	.246	940.
430.	.27249	128.95	1.35	62.565	87.795	1.25471	.160	.244	954.
440.	.28023	133.30	1.31	64.275	90.221	1.26029	.160	.242	967.
450.	.28791	137.59	1.27	65.975	92.631	1.26571	.159	.240	980.
460.	.29552	141.82	1.23	67.665	95.026	1.27097	.159	.239	993.
470.	.30308	146.00	1.20	69.347	97.409	1.27610	.159	.238	1005.
480.	.31059	150.13	1.17	71.022	99.779	1.28109	.159	.237	1017.
490.	.31806	154.23	1.14	72.691	102.140	1.28595	.159	.236	1030.
500.	.32549	158.28	1.11	74.354	104.491	1.29070	.159	.235	1041.
510.	.33289	162.31	1.08	76.013	106.834	1.29534	.159	.234	1053.
520.	.34025	166.30	1.05	77.667	109.170	1.29988	.159	.233	1064.
530.	.34758	170.26	1.03	79.318	111.499	1.30432	.159	.233	1075.
540.	.35488	174.19	1.01	80.966	113.823	1.30866	.159	.232	1087.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

600. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 98.700	.01223	2055.96	320.23	-83.126	-81.767	.50212	.261	.397	3808.
100.	.01226	2035.39	316.09	-82.613	-81.250	.50732	.261	.397	3792.
105.	.01238	1956.81	301.21	-80.640	-79.264	.52670	.259	.397	3729.
110.	.01250	1878.93	287.68	-78.668	-77.280	.54517	.257	.397	3669.
115.	.01262	1801.70	275.21	-76.698	-75.296	.56280	.254	.397	3610.
120.	.01274	1725.09	263.60	-74.729	-73.313	.57968	.251	.397	3552.
125.	.01287	1649.13	252.66	-72.760	-71.330	.59587	.248	.397	3494.
130.	.01300	1573.86	242.30	-70.790	-69.346	.61143	.245	.397	3436.
135.	.01313	1499.36	232.40	-68.821	-67.362	.62640	.242	.397	3378.
140.	.01327	1425.69	222.89	-66.851	-65.377	.64084	.238	.397	3318.
145.	.01340	1352.96	213.72	-64.879	-63.389	.65479	.235	.398	3258.
150.	.01355	1281.27	204.83	-62.905	-61.399	.66828	.231	.399	3197.
155.	.01370	1210.72	196.19	-60.928	-59.406	.68136	.228	.399	3135.
160.	.01385	1141.43	187.77	-58.947	-57.408	.69404	.224	.400	3070.
165.	.01401	1073.50	179.52	-56.962	-55.405	.70637	.221	.401	3005.
170.	.01418	1007.07	171.45	-54.971	-53.395	.71837	.218	.403	2937.
175.	.01436	942.23	163.53	-52.972	-51.377	.73007	.215	.404	2867.
180.	.01454	879.10	155.75	-50.965	-49.350	.74149	.212	.407	2794.
185.	.01473	817.79	148.11	-48.947	-47.311	.75266	.210	.409	2719.
190.	.01493	758.39	140.60	-46.917	-45.258	.76362	.208	.412	2641.
195.	.01515	700.97	133.23	-44.871	-43.188	.77437	.206	.416	2560.
200.	.01537	645.61	126.02	-42.806	-41.099	.78495	.205	.420	2477.
205.	.01561	592.32	118.97	-40.720	-38.986	.79539	.204	.425	2391.
210.	.01586	541.10	112.12	-38.608	-36.846	.80570	.204	.431	2303.
215.	.01613	491.89	105.50	-36.466	-34.674	.81593	.204	.438	2214.
220.	.01642	444.56	99.14	-34.287	-32.463	.82609	.203	.446	2126.
225.	.01673	398.87	93.11	-32.067	-30.208	.83622	.202	.456	2041.
230.	.01707	354.47	87.45	-29.798	-27.901	.84635	.198	.466	1965.
235.	.01746	312.24	81.60	-27.451	-25.511	.85664	.199	.482	1872.
240.	.01789	268.63	76.44	-25.021	-23.034	.86707	.197	.507	1788.
245.	.01838	226.16	70.05	-22.492	-20.450	.87772	.196	.528	1682.
250.	.01894	184.84	63.68	-19.842	-17.738	.88868	.196	.560	1566.
255.	.01963	144.40	57.14	-17.012	-14.831	.90019	.196	.607	1440.
260.	.02049	104.96	50.10	-13.913	-11.636	.91260	.198	.682	1293.
265.	.02171	66.13	42.41	-10.315	-7.903	.92682	.204	.834	1118.
* 269.107	.02338	32.05	35.18	-6.475	-3.877	.94189	.215	1.267	936.
* 269.107	.07742	12.17	6.79	23.178	31.780	1.07442	.230	1.360	577.
270.	.08017	14.52	6.45	23.984	32.891	1.07854	.225	1.146	585.
275.	.09132	24.18	5.35	27.125	37.271	1.09462	.209	.711	617.
280.	.09957	31.29	4.72	29.355	40.418	1.10597	.199	.566	641.
285.	.10655	37.23	4.30	31.203	43.041	1.11525	.193	.490	662.
290.	.11277	42.47	3.97	32.830	45.360	1.12332	.188	.441	680.
295.	.11849	47.21	3.71	34.312	47.477	1.13056	.184	.408	696.
300.	.12384	51.59	3.50	35.690	49.450	1.13719	.181	.383	711.
310.	.13374	59.56	3.16	38.229	53.089	1.14913	.176	.348	738.
320.	.14289	66.76	2.90	40.569	56.445	1.15978	.173	.325	762.
330.	.15151	73.43	2.69	42.773	59.606	1.16951	.170	.308	785.
340.	.15973	79.68	2.51	44.877	62.624	1.17852	.168	.296	805.
350.	.16764	85.61	2.37	46.907	65.532	1.18695	.167	.286	825.
360.	.17529	91.27	2.24	48.878	68.353	1.19490	.166	.278	843.
370.	.18274	96.71	2.13	50.801	71.104	1.20244	.165	.272	860.
380.	.19002	101.96	2.03	52.685	73.796	1.20962	.164	.267	877.
390.	.19714	107.06	1.94	54.536	76.439	1.21648	.163	.262	893.
400.	.20414	112.01	1.87	56.360	79.041	1.22307	.162	.258	909.
410.	.21103	116.85	1.79	58.160	81.606	1.22940	.162	.255	924.
420.	.21782	121.58	1.73	59.939	84.140	1.23551	.161	.252	938.
430.	.22453	126.21	1.67	61.701	86.647	1.24141	.161	.249	952.
440.	.23116	130.76	1.61	63.447	89.130	1.24712	.160	.247	966.
450.	.23773	135.23	1.56	65.179	91.592	1.25265	.160	.245	979.
460.	.24423	139.64	1.52	66.900	94.035	1.25802	.160	.243	993.
470.	.25068	143.98	1.47	68.610	96.461	1.26324	.160	.242	1005.
480.	.25708	148.27	1.43	70.311	98.873	1.26831	.159	.240	1018.
490.	.26343	152.51	1.39	72.003	101.271	1.27326	.159	.239	1030.
500.	.26974	156.70	1.36	73.688	103.657	1.27808	.159	.238	1042.
510.	.27602	160.85	1.32	75.367	106.033	1.28278	.159	.237	1054.
520.	.28226	164.96	1.29	77.040	108.400	1.28738	.159	.236	1066.
530.	.28847	169.04	1.26	78.708	110.758	1.29187	.159	.235	1077.
540.	.29465	173.08	1.23	80.372	113.109	1.29627	.159	.235	1088.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

700. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 98.841	.01223	2061.78	320.26	-83.112	-81.527	.50226	.261	.397	3812.
100.	.01226	2043.51	316.58	-82.655	-81.066	.50689	.261	.397	3797.
105.	.01237	1965.15	301.70	-80.685	-79.081	.52627	.259	.397	3735.
110.	.01249	1887.50	288.17	-78.716	-77.097	.54473	.257	.397	3675.
115.	.01261	1810.49	275.71	-76.749	-75.114	.56235	.254	.396	3617.
120.	.01273	1734.11	264.09	-74.782	-73.132	.57922	.251	.396	3559.
125.	.01286	1658.38	253.16	-72.817	-71.150	.59540	.248	.396	3501.
130.	.01299	1583.35	242.81	-70.852	-69.168	.61095	.245	.396	3444.
135.	.01312	1509.08	232.92	-68.886	-67.186	.62591	.242	.397	3386.
140.	.01325	1435.66	223.43	-66.920	-65.202	.64034	.238	.397	3327.
145.	.01339	1363.18	214.27	-64.953	-63.217	.65427	.235	.397	3267.
150.	.01353	1291.75	205.40	-62.984	-61.230	.66774	.231	.398	3206.
155.	.01368	1221.46	196.78	-61.013	-59.239	.68079	.228	.398	3144.
160.	.01384	1152.43	188.38	-59.038	-57.245	.69346	.225	.399	3081.
165.	.01400	1084.79	180.16	-57.060	-55.245	.70576	.221	.400	3015.
170.	.01416	1018.63	172.12	-55.076	-53.240	.71774	.218	.402	2948.
175.	.01434	954.08	164.23	-53.085	-51.227	.72941	.215	.403	2879.
180.	.01452	891.24	156.49	-51.086	-49.205	.74080	.212	.405	2807.
185.	.01471	830.22	148.89	-49.078	-47.172	.75194	.210	.408	2733.
190.	.01490	771.12	141.42	-47.058	-45.126	.76286	.208	.411	2656.
195.	.01511	714.01	134.11	-45.023	-43.064	.77357	.206	.414	2577.
200.	.01533	658.95	126.95	-42.971	-40.984	.78410	.205	.418	2494.
205.	.01557	605.96	119.96	-40.899	-38.882	.79449	.204	.423	2410.
210.	.01581	555.05	113.16	-38.803	-36.754	.80475	.204	.428	2324.
215.	.01608	506.14	106.60	-36.679	-34.595	.81490	.204	.435	2237.
220.	.01636	459.11	100.31	-34.522	-32.401	.82499	.203	.442	2151.
225.	.01666	413.72	94.33	-32.327	-30.167	.83503	.202	.451	2068.
230.	.01699	369.64	88.72	-30.089	-27.887	.84505	.198	.460	1994.
235.	.01737	327.32	83.06	-27.779	-25.528	.85519	.199	.475	1905.
240.	.01777	284.48	77.76	-25.401	-23.098	.86543	.198	.496	1819.
245.	.01823	243.12	71.81	-22.934	-20.571	.87585	.196	.516	1723.
250.	.01876	202.92	65.68	-20.369	-17.937	.88649	.195	.541	1615.
255.	.01938	164.10	59.49	-17.661	-15.149	.89753	.195	.578	1500.
260.	.02014	126.70	53.01	-14.755	-12.145	.90920	.196	.629	1372.
265.	.02112	89.93	46.20	-11.528	-8.791	.92197	.200	.719	1225.
270.	.02255	54.06	38.68	-7.716	-4.793	.93691	.206	.910	1051.
275.	.02554	16.49	28.34	-2.047	1.263	.95912	.224	1.842	792.
* 276.209	.02770	5.33	24.10	.809	4.400	.97050	.241	4.516	680.
* 276.209	.05367	2.96	10.64	17.559	24.516	1.04335	.258	5.894	560.
280.	.06900	14.88	7.62	23.583	32.527	1.07221	.224	1.189	604.
285.	.07875	23.74	6.32	26.934	37.141	1.08856	.209	.759	633.
290.	.08613	30.86	5.57	29.325	40.489	1.10020	.199	.600	656.
295.	.09237	36.88	5.05	31.287	43.259	1.10968	.193	.515	676.
300.	.09792	42.22	4.66	33.002	45.695	1.11786	.188	.462	694.
310.	.10776	51.57	4.10	35.995	49.964	1.13187	.181	.398	725.
320.	.11654	59.77	3.69	38.633	53.740	1.14386	.176	.360	752.
330.	.12464	67.20	3.38	41.052	57.208	1.15453	.173	.335	776.
340.	.13224	74.07	3.14	43.322	60.463	1.16425	.171	.317	798.
350.	.13948	80.52	2.93	45.483	63.562	1.17324	.169	.303	819.
360.	.14643	86.63	2.76	47.562	66.542	1.18163	.167	.293	838.
370.	.15314	92.46	2.61	49.576	69.427	1.18954	.166	.284	856.
380.	.15967	98.06	2.48	51.538	72.235	1.19702	.165	.277	874.
390.	.16604	103.47	2.36	53.457	74.979	1.20415	.164	.272	891.
400.	.17227	108.70	2.26	55.340	77.670	1.21097	.163	.267	907.
410.	.17838	113.79	2.17	57.193	80.315	1.21750	.163	.262	922.
420.	.18439	118.76	2.08	59.019	82.921	1.22378	.162	.259	937.
430.	.19032	123.60	2.01	60.823	85.492	1.22983	.162	.256	952.
440.	.19616	128.35	1.94	62.608	88.034	1.23567	.161	.253	966.
450.	.20193	133.01	1.87	64.375	90.550	1.24132	.161	.251	979.
460.	.20764	137.58	1.81	66.127	93.042	1.24680	.160	.248	993.
470.	.21329	142.09	1.76	67.866	95.513	1.25212	.160	.246	1006.
480.	.21890	146.53	1.71	69.593	97.967	1.25728	.160	.244	1019.
490.	.22445	150.90	1.66	71.310	100.404	1.26231	.160	.243	1031.
500.	.22997	155.23	1.61	73.018	102.826	1.26720	.159	.242	1044.
510.	.23544	159.51	1.57	74.717	105.236	1.27197	.159	.240	1056.
520.	.24089	163.74	1.53	76.409	107.634	1.27663	.159	.239	1068.
530.	.24630	167.93	1.49	78.096	110.021	1.28118	.159	.238	1079.
540.	.25168	172.08	1.46	79.776	112.399	1.28562	.159	.237	1091.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

800. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	Cv BTU/LB-R	Cp BTU/LB-R	VELOCITY OF SOUND FT/S
* 98.993	.01223	2067.60	320.29	-83.098	-61.287	.50240	.261	.397	3816.
100.	.01225	2051.61	317.06	-82.697	-80.883	.50646	.261	.397	3803.
105.	.01237	1973.47	302.18	-80.729	-78.897	.52583	.259	.397	3741.
110.	.01248	1896.04	288.66	-78.763	-76.914	.54428	.257	.397	3681.
115.	.01260	1819.25	276.19	-76.799	-74.932	.56191	.254	.396	3623.
120.	.01273	1743.10	264.58	-74.836	-72.951	.57877	.252	.396	3566.
125.	.01285	1667.60	253.66	-72.874	-70.970	.59494	.249	.396	3508.
130.	.01298	1592.80	243.31	-70.912	-68.990	.61047	.245	.396	3451.
135.	.01311	1518.77	233.44	-68.951	-67.009	.62542	.242	.396	3393.
140.	.01324	1445.59	223.96	-66.989	-65.028	.63983	.239	.396	3335.
145.	.01338	1373.36	214.81	-65.027	-63.045	.65375	.235	.397	3276.
150.	.01352	1302.17	205.96	-63.063	-61.060	.66720	.232	.397	3215.
155.	.01367	1232.14	197.36	-61.097	-59.072	.68024	.228	.398	3154.
160.	.01382	1163.38	188.98	-59.128	-57.081	.69288	.225	.399	3091.
165.	.01398	1095.99	180.79	-57.156	-55.085	.70516	.222	.400	3026.
170.	.01414	1030.11	172.78	-55.179	-53.084	.71711	.218	.401	2960.
175.	.01431	965.84	164.92	-53.196	-51.076	.72875	.215	.402	2891.
180.	.01449	903.28	157.22	-51.206	-49.059	.74012	.213	.404	2820.
185.	.01468	842.55	149.65	-49.206	-47.032	.75123	.210	.407	2747.
190.	.01488	783.73	142.23	-47.196	-44.992	.76211	.208	.409	2671.
195.	.01508	726.91	134.96	-45.172	-42.938	.77278	.207	.412	2593.
200.	.01530	672.14	127.85	-43.133	-40.866	.78327	.205	.416	2512.
205.	.01553	619.45	120.92	-41.074	-38.774	.79361	.205	.421	2428.
210.	.01577	568.82	114.18	-38.993	-36.657	.80381	.204	.426	2344.
215.	.01603	520.20	107.67	-36.886	-34.512	.81391	.204	.432	2258.
220.	.01630	473.44	101.43	-34.749	-32.334	.82392	.204	.439	2174.
225.	.01660	428.34	95.51	-32.578	-30.119	.83387	.202	.447	2094.
230.	.01692	384.55	89.95	-30.369	-27.863	.84378	.198	.455	2022.
235.	.01728	342.19	84.46	-28.093	-25.534	.85380	.199	.469	1936.
240.	.01767	300.03	78.98	-25.761	-23.144	.86387	.198	.486	1848.
245.	.01810	259.57	73.43	-23.349	-20.667	.87408	.196	.505	1760.
250.	.01859	220.28	67.54	-20.854	-18.100	.88445	.195	.526	1660.
255.	.01917	182.64	61.61	-18.244	-15.405	.89513	.195	.555	1553.
260.	.01984	146.55	55.51	-15.478	-12.539	.90626	.195	.594	1438.
265.	.02069	111.31	49.26	-12.486	-9.422	.91813	.197	.655	1309.
270.	.02180	77.60	42.67	-9.137	-5.908	.93127	.201	.758	1165.
275.	.02347	44.70	35.27	-5.089	-1.612	.94703	.208	.989	992.
280.	.02712	13.58	25.37	1.039	5.057	.97103	.227	2.035	751.
285.	.05137	8.08	10.95	18.781	26.391	1.04656	.242	2.309	597.
290.	.06343	18.25	8.26	24.233	33.629	1.07178	.217	1.026	632.
295.	.07123	26.02	7.04	27.350	37.903	1.08640	.205	.733	657.
300.	.07752	32.58	6.26	29.720	41.203	1.09750	.197	.599	678.
310.	.08782	43.57	5.28	33.445	46.455	1.11473	.187	.470	713.
320.	.09654	52.86	4.65	36.502	50.803	1.12854	.180	.406	742.
330.	.10434	61.10	4.19	39.200	54.657	1.14040	.176	.368	768.
340.	.11155	68.62	3.84	41.672	58.196	1.15097	.173	.342	792.
350.	.11832	75.60	3.56	43.988	61.517	1.16060	.171	.323	814.
360.	.12477	82.16	3.33	46.192	64.675	1.16950	.169	.309	834.
370.	.13096	88.38	3.13	48.309	67.708	1.17781	.168	.298	853.
380.	.13694	94.33	2.96	50.357	70.643	1.18563	.166	.289	871.
390.	.14274	100.04	2.81	52.350	73.496	1.19305	.165	.282	889.
400.	.14840	105.55	2.68	54.298	76.282	1.20010	.165	.276	905.
410.	.15394	110.89	2.56	56.207	79.011	1.20684	.164	.270	921.
420.	.15936	116.08	2.46	58.084	81.692	1.21330	.163	.266	936.
430.	.16470	121.14	2.36	59.933	84.332	1.21951	.162	.262	951.
440.	.16995	126.08	2.28	61.758	86.934	1.22549	.162	.259	966.
450.	.17513	130.92	2.20	63.562	89.505	1.23127	.161	.256	980.
460.	.18024	135.66	2.12	65.347	92.048	1.23686	.161	.253	994.
470.	.18530	140.32	2.06	67.116	94.567	1.24228	.161	.251	1007.
480.	.19031	144.90	1.99	68.871	97.063	1.24753	.160	.249	1020.
490.	.19526	149.42	1.93	70.613	99.539	1.25264	.160	.247	1033.
500.	.20018	153.87	1.88	72.344	101.998	1.25761	.160	.245	1045.
510.	.20506	158.27	1.83	74.065	104.442	1.26244	.160	.244	1058.
520.	.20990	162.62	1.78	75.777	106.871	1.26716	.160	.242	1070.
530.	.21471	166.92	1.74	77.481	109.288	1.27177	.159	.241	1082.
540.	.21949	171.18	1.69	79.178	111.694	1.27626	.159	.240	1093.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

900. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	Cv BTU/LB-R	Cp BTU/LB-R	VELOCITY OF SOUND FT/S
* 99.124	.01222	2073.42	320.32	-83.083	-81.046	.50254	.262	.397	3820.
100.	.01224	2059.68	317.55	-82.739	-80.699	.50603	.261	.397	3808.
105.	.01236	1981.76	302.67	-80.774	-78.714	.52540	.259	.397	3747.
110.	.01248	1904.55	289.14	-78.810	-76.731	.54385	.257	.396	3687.
115.	.01259	1827.98	276.68	-76.849	-74.750	.56146	.255	.396	3630.
120.	.01272	1752.06	265.07	-74.889	-72.770	.57831	.252	.396	3572.
125.	.01284	1676.78	254.16	-72.930	-70.790	.59447	.249	.396	3515.
130.	.01297	1602.21	243.82	-70.972	-68.811	.61000	.246	.396	3459.
135.	.01310	1528.41	233.95	-69.015	-66.832	.62493	.242	.396	3401.
140.	.01323	1455.47	224.48	-67.057	-64.853	.63933	.239	.396	3343.
145.	.01337	1383.48	215.36	-65.100	-62.872	.65323	.235	.396	3284.
150.	.01351	1312.54	206.52	-63.141	-60.890	.66667	.232	.397	3225.
155.	.01365	1242.76	197.94	-61.180	-58.905	.67969	.229	.397	3163.
160.	.01380	1174.25	189.58	-59.217	-56.917	.69231	.225	.398	3101.
165.	.01396	1107.13	181.42	-57.251	-54.925	.70457	.222	.399	3037.
170.	.01412	1041.51	173.43	-55.281	-52.927	.71649	.219	.400	2971.
175.	.01429	977.51	165.61	-53.305	-50.923	.72811	.216	.401	2903.
180.	.01447	915.23	157.93	-51.323	-48.912	.73945	.213	.403	2833.
185.	.01465	854.77	150.41	-49.333	-46.890	.75052	.211	.405	2761.
190.	.01485	796.23	143.03	-47.332	-44.857	.76137	.209	.408	2686.
195.	.01505	739.69	135.80	-45.319	-42.810	.77200	.207	.411	2608.
200.	.01526	685.19	128.74	-43.291	-40.747	.78246	.206	.415	2529.
205.	.01549	632.77	121.85	-41.245	-38.664	.79274	.205	.419	2447.
210.	.01573	582.42	115.17	-39.179	-36.558	.80290	.205	.424	2363.
215.	.01598	534.06	108.72	-37.088	-34.425	.81294	.204	.429	2280.
220.	.01625	487.58	102.53	-34.969	-32.262	.82288	.204	.436	2197.
225.	.01653	442.74	96.65	-32.820	-30.064	.83275	.202	.443	2119.
230.	.01685	399.23	91.14	-30.638	-27.831	.84256	.198	.450	2049.
235.	.01719	356.86	85.83	-28.394	-25.529	.85247	.198	.464	1966.
240.	.01756	315.30	80.15	-26.101	-23.174	.86238	.198	.477	1877.
245.	.01798	275.55	74.93	-23.739	-20.743	.87241	.196	.495	1795.
250.	.01844	237.04	69.26	-21.306	-18.232	.88255	.195	.514	1701.
255.	.01898	200.30	63.54	-18.776	-15.613	.89293	.194	.537	1601.
260.	.01959	165.10	57.72	-16.120	-12.854	.90364	.194	.567	1494.
265.	.02034	130.90	51.87	-13.294	-9.905	.91488	.195	.613	1379.
270.	.02127	98.41	45.85	-10.222	-6.677	.92694	.198	.681	1253.
275.	.02252	67.34	39.49	-6.748	-2.995	.94045	.202	.800	1112.
280.	.02443	38.87	32.42	-2.537	1.534	.95677	.209	1.045	950.
285.	.02837	14.77	23.74	3.581	8.309	.98073	.225	1.845	749.
290.	.04084	7.76	14.29	14.659	21.466	1.02649	.245	2.604	618.
295.	.05268	15.61	10.35	21.643	30.422	1.05715	.223	1.263	640.
300.	.06048	23.20	8.60	25.467	35.546	1.07439	.209	.857	664.
310.	.07183	35.76	6.80	30.467	42.438	1.09702	.193	.576	703.
320.	.08077	46.24	5.80	34.135	47.595	1.11340	.185	.466	735.
330.	.08946	55.27	5.14	37.196	51.939	1.12678	.179	.408	763.
340.	.09541	63.41	4.65	39.918	55.819	1.13836	.176	.371	788.
350.	.10186	70.91	4.27	42.419	59.394	1.14873	.173	.346	810.
360.	.10793	77.91	3.96	44.766	62.753	1.15819	.171	.327	831.
370.	.11372	84.51	3.70	46.998	65.951	1.16695	.169	.313	851.
380.	.11928	90.79	3.48	49.143	69.022	1.17514	.168	.302	870.
390.	.12466	96.80	3.30	51.217	71.992	1.18286	.167	.293	887.
400.	.12988	102.58	3.13	53.234	74.879	1.19017	.166	.285	904.
410.	.13496	108.16	2.99	55.205	77.697	1.19713	.165	.279	921.
420.	.13994	113.57	2.86	57.135	80.457	1.20378	.164	.273	937.
430.	.14482	118.83	2.74	59.032	83.166	1.21015	.163	.269	952.
440.	.14961	123.96	2.63	60.899	85.832	1.21628	.163	.265	967.
450.	.15433	128.97	2.54	62.741	88.461	1.22219	.162	.261	981.
460.	.15898	133.87	2.45	64.561	91.056	1.22789	.162	.258	995.
470.	.16357	138.68	2.37	66.361	93.621	1.23341	.161	.255	1009.
480.	.16811	143.41	2.29	68.145	96.161	1.23876	.161	.253	1022.
490.	.17260	148.05	2.22	69.913	98.678	1.24395	.161	.251	1035.
500.	.17705	152.63	2.16	71.667	101.174	1.24899	.160	.249	1048.
510.	.18146	157.15	2.10	73.410	103.652	1.25390	.160	.247	1060.
520.	.18584	161.61	2.04	75.142	106.113	1.25867	.160	.245	1072.
530.	.19018	166.02	1.99	76.865	108.559	1.26334	.160	.244	1084.
540.	.19449	170.38	1.94	78.579	110.993	1.26788	.159	.243	1096.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

1000. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 99.265	.01222	2079.22	320.35	-83.069	-80.806	.50268	.262	.397	3823.
100.	.01224	2067.74	318.03	-82.780	-80.515	.50561	.262	.397	3814.
105.	.01235	1990.03	303.15	-80.817	-78.530	.52497	.260	.397	3753.
110.	.01247	1913.04	289.62	-78.857	-76.548	.54341	.257	.396	3694.
115.	.01259	1836.69	277.16	-76.898	-74.568	.56102	.255	.396	3636.
120.	.01271	1760.98	265.56	-74.942	-72.589	.57786	.252	.396	3579.
125.	.01283	1685.93	254.65	-72.986	-70.610	.59401	.249	.396	3523.
130.	.01296	1611.59	244.32	-71.032	-68.633	.60952	.246	.395	3466.
135.	.01308	1538.02	234.46	-69.078	-66.655	.62445	.242	.395	3409.
140.	.01322	1465.31	225.01	-67.125	-64.678	.63883	.239	.396	3351.
145.	.01335	1393.56	215.89	-65.172	-62.699	.65272	.236	.396	3293.
150.	.01349	1322.86	207.07	-63.218	-60.719	.66614	.232	.396	3233.
155.	.01364	1253.33	198.51	-61.263	-58.737	.67914	.229	.397	3173.
160.	.01379	1185.07	190.17	-59.305	-56.752	.69174	.225	.397	3111.
165.	.01394	1118.20	182.03	-57.345	-54.763	.70398	.222	.398	3047.
170.	.01410	1052.84	174.07	-55.382	-52.770	.71588	.219	.399	2982.
175.	.01427	989.10	166.28	-53.413	-50.771	.72747	.216	.401	2915.
180.	.01445	927.08	158.64	-51.439	-48.764	.73878	.213	.402	2846.
185.	.01463	866.89	151.15	-49.457	-46.748	.74983	.211	.404	2774.
190.	.01482	808.62	143.81	-47.465	-44.721	.76064	.209	.407	2700.
195.	.01502	752.34	136.63	-45.462	-42.681	.77124	.207	.409	2624.
200.	.01523	698.11	129.61	-43.446	-40.625	.78165	.206	.413	2545.
205.	.01545	645.95	122.77	-41.412	-38.551	.79190	.205	.417	2464.
210.	.01568	595.86	116.14	-39.360	-36.455	.80200	.205	.422	2383.
215.	.01593	547.75	109.73	-37.284	-34.334	.81198	.205	.427	2300.
220.	.01619	501.52	103.59	-35.183	-32.185	.82187	.204	.433	2219.
225.	.01647	456.93	97.76	-33.054	-30.004	.83166	.202	.439	2143.
230.	.01678	413.68	92.29	-30.897	-27.791	.84138	.198	.445	2075.
235.	.01711	371.33	87.14	-28.684	-25.516	.85117	.198	.459	1995.
240.	.01747	330.30	81.56	-26.427	-23.192	.86096	.198	.471	1909.
245.	.01787	291.14	76.35	-24.108	-20.800	.87082	.196	.486	1828.
250.	.01831	253.28	70.85	-21.728	-18.338	.88077	.195	.502	1739.
255.	.01880	217.25	65.33	-19.266	-15.783	.89089	.194	.522	1645.
260.	.01938	182.68	59.73	-16.699	-13.111	.90127	.194	.547	1545.
265.	.02005	149.27	54.17	-14.000	-10.288	.91202	.194	.582	1439.
270.	.02086	117.60	48.55	-11.120	-7.258	.92335	.196	.632	1326.
275.	.02188	87.60	42.77	-7.972	-3.920	.93559	.198	.707	1204.
280.	.02327	60.13	36.70	-4.410	-.102	.94935	.202	.830	1071.
285.	.02536	35.92	30.15	-.127	4.570	.96588	.208	1.067	924.
290.	.02926	17.78	22.86	5.663	11.080	.98853	.223	1.574	763.
295.	.03703	11.76	16.17	13.394	20.251	1.01987	.234	1.899	665.
300.	.04594	16.18	12.22	19.768	28.274	1.04687	.222	1.304	663.
310.	.05869	28.87	8.80	26.951	37.818	1.07822	.201	.731	698.
320.	.06796	40.03	7.21	31.487	44.075	1.09811	.190	.545	730.
330.	.07570	49.90	6.24	35.028	49.046	1.11342	.183	.456	760.
340.	.08249	58.58	5.56	38.055	53.330	1.12621	.178	.405	785.
350.	.08870	66.54	5.06	40.772	57.198	1.13742	.175	.371	808.
360.	.09449	73.94	4.65	43.283	60.781	1.14752	.173	.347	830.
370.	.09997	80.90	4.33	45.645	64.157	1.15677	.171	.329	850.
380.	.10520	87.49	4.05	47.895	67.375	1.16535	.169	.315	869.
390.	.11023	93.78	3.82	50.058	70.470	1.17339	.169	.304	887.
400.	.11510	99.81	3.61	52.150	73.464	1.18097	.167	.295	905.
410.	.11983	105.62	3.43	54.185	76.375	1.18816	.166	.287	921.
420.	.12444	111.24	3.28	56.173	79.216	1.19501	.165	.281	937.
430.	.12896	116.69	3.13	58.119	81.999	1.20155	.164	.276	953.
440.	.13338	122.00	3.01	60.031	84.730	1.20783	.163	.271	968.
450.	.13773	127.17	2.89	61.913	87.417	1.21387	.163	.267	982.
460.	.14201	132.23	2.79	63.769	90.065	1.21969	.162	.263	997.
470.	.14623	137.18	2.69	65.602	92.679	1.22532	.162	.260	1010.
480.	.15039	142.04	2.60	67.414	95.263	1.23076	.161	.257	1024.
490.	.15451	146.82	2.52	69.209	97.821	1.23603	.161	.254	1037.
500.	.15859	151.52	2.44	70.988	100.354	1.24115	.161	.252	1050.
510.	.16262	156.15	2.37	72.753	102.866	1.24612	.160	.250	1063.
520.	.16662	160.71	2.31	74.506	105.360	1.25096	.160	.248	1075.
530.	.17059	165.22	2.24	76.247	107.836	1.25568	.160	.247	1087.
540.	.17453	169.68	2.19	77.979	110.297	1.26028	.160	.245	1099.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

1100. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	Cv BTU/LB-R	Cp BTU/LB-R	VELOCITY OF SOUND FT/S
* 99.408	.01221	2085.00	320.38	-83.054	-80.566	.50282	.262	.397	3827.
100.	.01223	2075.77	318.51	-82.821	-80.331	.50518	.262	.397	3820.
105.	.01234	1998.28	303.63	-80.861	-78.347	.52454	.260	.397	3758.
110.	.01246	1921.50	290.10	-78.903	-76.365	.54297	.258	.396	3700.
115.	.01258	1845.37	277.65	-76.948	-74.386	.56057	.255	.396	3642.
120.	.01270	1769.88	266.05	-74.994	-72.407	.57741	.252	.395	3586.
125.	.01282	1695.05	255.15	-73.042	-70.430	.59355	.249	.395	3530.
130.	.01295	1620.93	244.82	-71.091	-68.454	.60905	.246	.395	3473.
135.	.01307	1547.59	234.97	-69.141	-66.478	.62397	.243	.395	3417.
140.	.01320	1475.11	225.53	-67.192	-64.502	.63834	.239	.395	3359.
145.	.01334	1403.59	216.43	-65.243	-62.526	.65221	.236	.395	3301.
150.	.01348	1333.13	207.62	-63.294	-60.548	.66562	.232	.396	3242.
155.	.01362	1263.84	199.08	-61.344	-58.569	.67859	.229	.396	3182.
160.	.01377	1195.82	190.76	-59.392	-56.587	.69118	.226	.397	3121.
165.	.01393	1129.21	182.64	-57.438	-54.602	.70340	.222	.397	3058.
170.	.01409	1064.10	174.71	-55.481	-52.612	.71528	.219	.398	2993.
175.	.01425	1000.61	166.94	-53.520	-50.617	.72684	.216	.400	2927.
180.	.01442	938.85	159.34	-51.553	-48.615	.73812	.214	.401	2858.
185.	.01461	878.91	151.88	-49.579	-46.604	.74914	.211	.403	2787.
190.	.01479	820.90	144.58	-47.597	-44.583	.75992	.209	.405	2714.
195.	.01499	764.88	137.44	-45.604	-42.550	.77049	.208	.408	2639.
200.	.01520	710.90	130.46	-43.598	-40.502	.78086	.206	.411	2561.
205.	.01542	658.99	123.67	-41.576	-38.436	.79106	.206	.415	2482.
210.	.01564	609.14	117.08	-39.536	-36.350	.80112	.205	.419	2401.
215.	.01589	561.27	110.72	-37.476	-34.240	.81105	.205	.424	2320.
220.	.01614	515.28	104.63	-35.391	-32.103	.82087	.204	.430	2241.
225.	.01642	470.93	98.84	-33.282	-29.938	.83060	.203	.436	2166.
230.	.01671	427.92	93.41	-31.148	-27.744	.84024	.198	.441	2099.
235.	.01703	385.61	88.41	-28.963	-25.494	.84992	.198	.454	2022.
240.	.01738	345.07	82.90	-26.737	-23.197	.85959	.198	.465	1939.
245.	.01776	306.38	77.67	-24.459	-20.841	.86931	.197	.478	1858.
250.	.01818	269.08	72.35	-22.126	-18.423	.87908	.195	.493	1775.
255.	.01865	233.61	67.00	-19.721	-15.923	.88898	.194	.510	1686.
260.	.01918	199.51	61.58	-17.229	-13.322	.89908	.194	.530	1591.
265.	.01979	166.72	56.23	-14.632	-10.600	.90945	.194	.558	1492.
270.	.02052	135.67	50.91	-11.895	-7.715	.92023	.194	.597	1389.
275.	.02140	106.40	45.54	-8.965	-4.606	.93164	.196	.650	1279.
280.	.02251	79.46	40.03	-5.762	-1.176	.94400	.198	.728	1163.
285.	.02401	55.48	34.34	-2.157	2.735	.95784	.201	.848	1041.
290.	.02624	35.33	28.38	2.135	7.480	.97436	.210	1.053	907.
295.	.02985	21.71	22.40	7.381	13.461	.99480	.220	1.344	784.
300.	.03549	16.79	17.22	13.423	20.653	1.01897	.224	1.460	712.
310.	.04792	24.04	11.44	22.855	32.617	1.05826	.208	.926	704.
320.	.05750	34.93	8.94	28.544	40.257	1.08255	.194	.643	732.
330.	.06526	45.03	7.53	32.686	45.978	1.10017	.186	.514	759.
340.	.07196	54.19	6.60	36.083	50.740	1.11439	.181	.443	785.
350.	.07798	62.61	5.94	39.050	54.934	1.12656	.177	.399	808.
360.	.08354	70.34	5.42	41.746	58.762	1.13734	.174	.369	830.
370.	.08877	77.60	5.00	44.251	62.332	1.14712	.172	.346	851.
380.	.09373	84.47	4.66	46.616	65.707	1.15613	.170	.329	870.
390.	.09848	91.01	4.37	48.874	68.933	1.16451	.169	.316	888.
400.	.10306	97.27	4.13	51.047	72.039	1.17237	.168	.305	906.
410.	.10750	103.29	3.91	53.151	75.047	1.17980	.167	.296	923.
420.	.11181	109.11	3.72	55.198	77.973	1.18685	.166	.289	939.
430.	.11602	114.74	3.55	57.197	80.830	1.19357	.165	.283	955.
440.	.12015	120.21	3.40	59.155	83.628	1.20000	.164	.277	970.
450.	.12419	125.54	3.26	61.079	86.375	1.20618	.163	.272	985.
460.	.12817	130.74	3.14	62.972	89.078	1.21212	.163	.268	999.
470.	.13208	135.83	3.03	64.838	91.741	1.21785	.162	.265	1013.
480.	.13594	140.82	2.92	66.681	94.370	1.22338	.162	.261	1027.
490.	.13975	145.71	2.83	68.503	96.969	1.22874	.161	.258	1040.
500.	.14351	150.53	2.74	70.307	99.540	1.23393	.161	.256	1053.
510.	.14724	155.26	2.66	72.095	102.087	1.23898	.161	.254	1066.
520.	.15093	159.93	2.58	73.869	104.613	1.24388	.160	.252	1079.
530.	.15459	164.54	2.51	75.629	107.119	1.24866	.160	.251	1091.
540.	.15822	169.10	2.44	77.379	109.607	1.25331	.160	.248	1103.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

1200. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 99.548	.01221	2090.81	320.41	-83.039	-80.326	.50296	.262	.397	3831.
100.	.01222	2083.78	318.99	-82.862	-80.147	.50476	.262	.397	3825.
105.	.01234	2006.50	304.11	-80.904	-78.163	.52411	.260	.396	3764.
110.	.01245	1929.93	290.58	-78.949	-76.182	.54254	.258	.396	3706.
115.	.01257	1854.02	278.13	-76.996	-74.203	.56014	.255	.396	3649.
120.	.01269	1778.74	266.53	-75.046	-72.226	.57697	.252	.395	3592.
125.	.01281	1704.13	255.64	-73.097	-70.250	.59310	.249	.395	3537.
130.	.01293	1630.23	245.32	-71.150	-68.275	.60859	.246	.395	3481.
135.	.01306	1557.11	235.48	-69.204	-66.301	.62349	.243	.395	3424.
140.	.01319	1484.86	226.04	-67.259	-64.327	.63785	.240	.395	3367.
145.	.01333	1413.57	216.96	-65.314	-62.353	.65170	.236	.395	3310.
150.	.01347	1343.35	208.17	-63.369	-60.377	.66509	.233	.395	3251.
155.	.01361	1274.29	199.64	-61.424	-58.400	.67806	.229	.395	3191.
160.	.01376	1206.52	191.34	-59.478	-56.421	.69062	.226	.396	3130.
165.	.01391	1140.14	183.25	-57.530	-54.439	.70282	.223	.397	3068.
170.	.01407	1075.28	175.34	-55.579	-52.453	.71467	.219	.398	3004.
175.	.01423	1012.04	167.60	-53.625	-50.462	.72622	.217	.399	2938.
180.	.01440	950.53	160.03	-51.665	-48.465	.73747	.214	.400	2870.
185.	.01458	890.84	152.61	-49.700	-46.460	.74846	.212	.402	2800.
190.	.01477	833.07	145.34	-47.726	-44.444	.75921	.210	.404	2728.
195.	.01496	777.30	138.24	-45.742	-42.418	.76974	.208	.407	2654.
200.	.01517	723.56	131.30	-43.747	-40.377	.78008	.207	.410	2577.
205.	.01538	671.89	124.55	-41.736	-38.319	.79025	.206	.413	2499.
210.	.01560	622.27	118.01	-39.709	-36.242	.80026	.206	.418	2419.
215.	.01584	574.63	111.69	-37.662	-34.142	.81014	.205	.422	2340.
220.	.01609	528.86	105.64	-35.594	-32.018	.81991	.205	.427	2262.
225.	.01636	484.74	99.89	-33.503	-29.867	.82957	.203	.432	2188.
230.	.01665	441.96	94.50	-31.390	-27.691	.83913	.198	.437	2124.
235.	.01696	399.70	89.63	-29.233	-25.464	.84871	.198	.450	2049.
240.	.01729	359.60	84.19	-27.036	-23.193	.85827	.198	.460	1968.
245.	.01766	321.30	78.92	-24.792	-20.868	.86786	.197	.471	1888.
250.	.01806	284.49	73.74	-22.502	-18.488	.87747	.195	.484	1807.
255.	.01851	249.47	68.56	-20.148	-16.036	.88719	.194	.499	1723.
260.	.01901	215.74	63.34	-17.719	-13.496	.89705	.194	.517	1634.
265.	.01957	183.45	58.11	-15.206	-10.856	.90711	.193	.539	1540.
270.	.02023	152.88	53.04	-12.581	-8.086	.91746	.194	.570	1444.
275.	.02101	124.16	47.96	-9.810	-5.143	.92826	.194	.611	1344.
280.	.02195	97.56	42.81	-6.844	-1.966	.93971	.196	.665	1239.
285.	.02315	73.78	37.63	-3.613	1.531	.95209	.198	.740	1132.
290.	.02475	52.90	32.35	.028	5.528	.96600	.203	.854	1015.
295.	.02701	36.59	27.07	4.169	10.170	.98187	.210	1.008	902.
300.	.03028	26.09	22.09	8.901	15.628	1.00021	.215	1.168	810.
310.	.03972	23.18	14.73	18.501	27.327	1.03858	.211	1.060	734.
320.	.04898	31.57	11.03	25.350	36.234	1.06690	.198	.746	742.
330.	.05666	41.27	9.04	30.184	42.774	1.08704	.189	.578	764.
340.	.06325	50.52	7.79	34.005	48.060	1.10283	.183	.486	788.
350.	.06912	59.12	6.92	37.260	52.619	1.11606	.179	.429	811.
360.	.07450	67.13	6.26	40.160	56.714	1.12759	.176	.392	832.
370.	.07949	74.68	5.74	42.819	60.483	1.13792	.174	.365	853.
380.	.08423	81.77	5.32	45.309	64.024	1.14737	.172	.344	872.
390.	.08874	88.52	4.97	47.668	67.387	1.15610	.170	.329	890.
400.	.09308	94.99	4.67	49.926	70.609	1.16426	.169	.316	908.
410.	.09727	101.20	4.41	52.103	73.717	1.17194	.168	.306	925.
420.	.10133	107.19	4.19	54.213	76.730	1.17920	.167	.297	941.
430.	.10529	112.98	3.99	56.266	79.663	1.18610	.166	.290	957.
440.	.10916	118.61	3.81	58.273	82.530	1.19269	.165	.284	972.
450.	.11295	124.08	3.65	60.239	85.338	1.19900	.164	.278	987.
460.	.11667	129.42	3.50	62.170	88.095	1.20506	.163	.273	1002.
470.	.12033	134.63	3.37	64.071	90.808	1.21090	.163	.269	1016.
480.	.12393	139.74	3.25	65.945	93.483	1.21653	.162	.266	1030.
490.	.12748	144.75	3.14	67.796	96.123	1.22197	.162	.262	1043.
500.	.13099	149.67	3.04	69.625	98.732	1.22724	.161	.260	1056.
510.	.13446	154.51	2.95	71.436	101.314	1.23236	.161	.257	1069.
520.	.13789	159.27	2.86	73.231	103.872	1.23732	.160	.255	1082.
530.	.14130	163.98	2.78	75.011	106.408	1.24215	.160	.253	1095.
540.	.14467	168.62	2.71	76.778	108.924	1.24686	.160	.251	1107.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

1300. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM OERIVATIVE FT^3-PSIA/LB	ISOCHORE OERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUNO FT/S
* 99.688	.01221	2096.60	320.45	-83.025	-80.086	.50309	.262	.397	3834.
100.	.01221	2091.77	319.47	-82.903	-79.963	.50433	.262	.397	3831.
105.	.01233	2014.70	304.58	-80.947	-77.980	.52368	.260	.396	3770.
110.	.01244	1938.35	291.06	-78.995	-75.999	.54211	.258	.396	3712.
115.	.01256	1862.64	278.61	-77.045	-74.021	.55970	.255	.395	3655.
120.	.01268	1787.58	267.02	-75.097	-72.045	.57652	.253	.395	3599.
125.	.01280	1713.18	256.12	-73.151	-70.070	.59264	.250	.395	3543.
130.	.01292	1639.50	245.81	-71.208	-68.096	.60812	.246	.395	3488.
135.	.01305	1566.61	235.98	-69.265	-66.124	.62301	.243	.394	3432.
140.	.01318	1494.58	226.56	-67.324	-64.151	.63736	.240	.394	3375.
145.	.01331	1423.51	217.48	-65.384	-62.179	.65120	.236	.394	3318.
150.	.01345	1353.51	208.71	-63.444	-60.206	.66457	.233	.395	3260.
155.	.01359	1284.69	200.20	-61.504	-58.232	.67752	.229	.395	3201.
160.	.01374	1217.15	191.92	-59.563	-56.255	.69007	.226	.395	3140.
165.	.01389	1151.02	183.85	-57.621	-54.277	.70224	.223	.396	3078.
170.	.01405	1086.39	175.96	-55.676	-52.294	.71408	.220	.397	3015.
175.	.01421	1023.39	168.25	-53.728	-50.307	.72560	.217	.398	2949.
180.	.01438	962.12	160.71	-51.776	-48.314	.73683	.214	.399	2882.
185.	.01456	902.68	153.32	-49.818	-46.314	.74779	.212	.401	2813.
190.	.01474	845.15	146.09	-47.853	-44.304	.75851	.210	.403	2742.
195.	.01493	789.61	139.02	-45.878	-42.284	.76901	.208	.405	2668.
200.	.01513	736.11	132.12	-43.893	-40.250	.77931	.207	.408	2593.
205.	.01534	684.66	125.42	-41.893	-38.200	.78944	.206	.412	2516.
210.	.01557	635.26	118.91	-39.878	-36.131	.79941	.206	.416	2437.
215.	.01580	587.84	112.64	-37.845	-34.042	.80924	.206	.420	2359.
220.	.01604	542.28	106.63	-35.791	-31.929	.81896	.205	.425	2282.
225.	.01631	498.37	100.92	-33.717	-29.792	.82856	.203	.429	2210.
230.	.01658	455.81	95.55	-31.625	-27.633	.83804	.198	.433	2147.
235.	.01689	413.63	90.77	-29.493	-25.427	.84753	.199	.446	2074.
240.	.01721	373.92	85.43	-27.323	-23.179	.85700	.198	.455	1995.
245.	.01757	335.93	80.12	-25.111	-20.882	.86647	.197	.464	1916.
250.	.01795	299.55	75.06	-22.858	-18.537	.87594	.195	.476	1839.
255.	.01837	264.90	70.02	-20.550	-16.127	.88549	.194	.489	1758.
260.	.01885	231.45	64.96	-18.177	-13.640	.89515	.193	.505	1674.
265.	.01938	199.60	59.87	-15.733	-11.069	.90494	.193	.524	1584.
270.	.01998	169.42	54.96	-13.201	-8.391	.91495	.193	.549	1494.
275.	.02068	141.13	50.11	-10.553	-5.575	.92529	.193	.581	1401.
280.	.02151	114.78	45.26	-7.757	-2.580	.93608	.194	.622	1305.
285.	.02252	91.15	40.38	-4.770	.650	.94751	.195	.674	1207.
290.	.02379	69.90	35.52	-1.504	4.222	.95995	.200	.748	1101.
295.	.02544	52.26	30.72	2.068	8.193	.97353	.205	.844	999.
300.	.02766	39.01	26.10	6.016	12.673	.98858	.209	.951	907.
310.	.03424	27.41	18.32	14.613	22.855	1.02196	.210	1.034	791.
320.	.04228	30.76	13.47	22.070	32.249	1.05181	.201	.825	766.
330.	.04962	38.94	10.78	27.571	39.516	1.07419	.191	.640	777.
340.	.05603	47.78	9.13	31.843	45.330	1.09155	.185	.530	796.
350.	.06172	56.35	8.00	35.406	50.264	1.10587	.181	.461	817.
360.	.06691	64.47	7.18	38.528	54.636	1.11819	.177	.416	837.
370.	.07173	72.17	6.54	41.357	58.624	1.12912	.175	.384	857.
380.	.07625	79.44	6.03	43.977	62.334	1.13902	.173	.360	875.
390.	.08056	86.36	5.60	46.444	65.837	1.14812	.171	.342	894.
400.	.08469	92.99	5.25	48.791	69.178	1.15658	.170	.327	911.
410.	.08867	99.36	4.94	51.044	72.388	1.16450	.169	.315	928.
420.	.09252	105.50	4.68	53.218	75.489	1.17198	.167	.305	944.
430.	.09626	111.44	4.44	55.329	78.501	1.17906	.166	.297	960.
440.	.09991	117.20	4.24	57.385	81.436	1.18581	.166	.290	976.
450.	.10348	122.80	4.05	59.396	84.306	1.19226	.165	.284	990.
460.	.10698	128.26	3.89	61.366	87.119	1.19844	.164	.279	1005.
470.	.11042	133.59	3.74	63.302	89.882	1.20439	.163	.274	1019.
480.	.11380	138.81	3.60	65.208	92.602	1.21011	.163	.270	1033.
490.	.11713	143.92	3.47	67.087	95.284	1.21564	.162	.266	1047.
500.	.12042	148.94	3.36	68.942	97.931	1.22099	.162	.263	1060.
510.	.12367	153.88	3.25	70.777	100.548	1.22617	.161	.260	1073.
520.	.12689	158.73	3.15	72.593	103.138	1.23120	.161	.258	1086.
530.	.13007	163.52	3.06	74.392	105.704	1.23609	.160	.255	1099.
540.	.13322	168.25	2.98	76.177	108.248	1.24084	.160	.253	1111.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

1400. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_p BTU/LB-R	VELOCITY OF SOUND FT/S
* 99.829	.01220	2102.39	320.48	-83.010	-79.847	.50323	.262	.397	3838.
100.	.01221	2099.74	319.94	-82.943	-79.779	.50391	.262	.397	3836.
105.	.01232	2022.89	305.06	-80.990	-77.796	.52326	.260	.396	3776.
110.	.01244	1946.73	291.54	-79.040	-75.816	.54168	.258	.396	3718.
115.	.01255	1871.24	279.09	-77.093	-73.839	.55926	.256	.395	3661.
120.	.01267	1796.39	267.50	-75.148	-71.863	.57608	.253	.395	3606.
125.	.01279	1722.21	256.61	-73.206	-69.890	.59219	.250	.395	3550.
130.	.01291	1648.74	246.30	-71.265	-67.917	.60766	.247	.394	3495.
135.	.01304	1576.06	236.48	-69.327	-65.946	.62254	.243	.394	3439.
140.	.01317	1504.25	227.07	-67.389	-63.975	.63687	.240	.394	3383.
145.	.01330	1433.41	218.00	-65.453	-62.005	.65070	.237	.394	3326.
150.	.01344	1363.64	209.24	-63.518	-60.034	.66406	.233	.394	3269.
155.	.01358	1295.04	200.75	-61.583	-58.062	.67699	.230	.394	3210.
160.	.01373	1227.73	192.49	-59.647	-56.089	.68952	.226	.395	3150.
165.	.01388	1161.83	184.44	-57.710	-54.113	.70168	.223	.395	3088.
170.	.01403	1097.44	176.58	-55.772	-52.134	.71349	.220	.396	3025.
175.	.01419	1034.67	168.89	-53.830	-50.151	.72499	.217	.397	2961.
180.	.01436	973.63	161.38	-51.885	-48.163	.73619	.215	.398	2894.
185.	.01453	914.42	154.02	-49.935	-46.167	.74713	.212	.400	2826.
190.	.01472	857.13	146.82	-47.978	-44.163	.75782	.210	.402	2755.
195.	.01491	801.81	139.79	-46.012	-42.148	.76829	.209	.404	2683.
200.	.01510	748.53	132.93	-44.036	-40.121	.77856	.207	.407	2608.
205.	.01531	697.31	126.26	-42.047	-38.078	.78865	.207	.410	2532.
210.	.01553	648.12	119.80	-40.044	-36.018	.79858	.206	.414	2455.
215.	.01576	600.90	113.56	-38.023	-33.938	.80837	.206	.418	2378.
220.	.01600	555.54	107.59	-35.984	-31.836	.81803	.205	.422	2302.
225.	.01625	511.83	101.92	-33.926	-29.712	.82757	.203	.426	2231.
230.	.01652	469.48	96.58	-31.852	-27.565	.83699	.198	.430	2170.
235.	.01682	427.38	91.87	-29.744	-25.384	.84639	.199	.442	2098.
240.	.01714	388.03	86.63	-27.600	-23.157	.85576	.198	.450	2022.
245.	.01748	350.29	81.40	-25.417	-20.886	.86513	.197	.459	1945.
250.	.01785	314.30	76.34	-23.198	-18.572	.87448	.196	.469	1868.
255.	.01825	279.95	71.40	-20.930	-16.199	.88388	.194	.481	1791.
260.	.01870	246.73	66.48	-18.607	-13.759	.89335	.193	.495	1710.
265.	.01920	215.25	61.52	-16.222	-11.246	.90293	.193	.511	1625.
270.	.01976	185.40	56.73	-13.766	-8.645	.91265	.193	.531	1540.
275.	.02040	157.46	52.06	-11.217	-5.930	.92262	.193	.557	1453.
280.	.02114	131.31	47.44	-8.553	-3.073	.93291	.193	.590	1364.
285.	.02202	107.77	42.80	-5.740	-.033	.94367	.194	.628	1273.
290.	.02308	86.32	38.24	-2.723	3.260	.95514	.198	.682	1175.
295.	.02440	67.87	33.73	.500	6.827	.96733	.202	.747	1079.
300.	.02607	53.03	29.41	3.979	10.739	.98048	.204	.820	993.
310.	.03084	35.58	21.72	11.574	19.570	1.00943	.206	.930	862.
320.	.03729	33.01	16.15	18.963	28.632	1.03821	.201	.852	805.
330.	.04396	38.44	12.72	24.938	36.334	1.06192	.193	.690	798.
340.	.05005	46.22	10.61	29.634	42.608	1.08066	.187	.571	809.
350.	.05553	54.42	9.20	33.509	47.904	1.09602	.182	.493	826.
360.	.06053	62.44	8.18	36.862	52.553	1.10913	.178	.440	845.
370.	.06516	70.17	7.40	39.867	56.759	1.12065	.176	.403	863.
380.	.06951	77.57	6.79	42.629	60.650	1.13103	.174	.376	881.
390.	.07363	84.64	6.29	45.208	64.296	1.14051	.172	.355	899.
400.	.07756	91.30	5.86	47.645	67.751	1.14926	.171	.338	915.
410.	.08135	97.79	5.50	49.976	71.064	1.15744	.169	.325	932.
420.	.08501	104.05	5.19	52.218	74.255	1.16513	.168	.314	948.
430.	.08856	110.11	4.92	54.386	77.345	1.17240	.167	.305	964.
440.	.09202	115.99	4.68	56.494	80.350	1.17931	.166	.297	979.
450.	.09540	121.71	4.47	58.549	83.282	1.18590	.165	.290	994.
460.	.09871	127.28	4.28	60.560	86.151	1.19220	.164	.284	1009.
470.	.10196	132.71	4.11	62.532	88.964	1.19825	.164	.279	1023.
480.	.10515	138.03	3.95	64.470	91.730	1.20408	.163	.274	1037.
490.	.10830	143.24	3.81	66.378	94.453	1.20969	.162	.270	1051.
500.	.11140	148.35	3.68	68.259	97.138	1.21512	.162	.267	1064.
510.	.11446	153.37	3.56	70.118	99.790	1.22037	.161	.264	1078.
520.	.11748	158.32	3.45	71.955	102.412	1.22546	.161	.261	1091.
530.	.12048	163.19	3.35	73.775	105.008	1.23040	.160	.258	1103.
540.	.12344	168.00	3.25	75.577	107.579	1.23521	.160	.256	1116.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

1500. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 99.969	.01220	2108.17	320.52	-82.995	-79.607	.50337	.263	.397	3842.
100.	.01220	2107.69	320.42	-82.983	-79.595	.50349	.263	.397	3841.
105.	.01231	2031.04	305.53	-81.033	-77.612	.52284	.261	.396	3782.
110.	.01243	1955.10	292.01	-79.085	-75.633	.54125	.258	.396	3724.
115.	.01254	1879.81	279.56	-77.140	-73.656	.55883	.256	.395	3668.
120.	.01266	1805.17	267.98	-75.199	-71.682	.57563	.253	.395	3612.
125.	.01278	1731.20	257.09	-73.259	-69.709	.59174	.250	.394	3557.
130.	.01290	1657.94	246.79	-71.322	-67.738	.60720	.247	.394	3502.
135.	.01303	1585.48	236.98	-69.387	-65.768	.62207	.243	.394	3447.
140.	.01316	1513.88	227.57	-67.454	-63.799	.63639	.240	.394	3391.
145.	.01329	1443.26	218.52	-65.522	-61.831	.65020	.237	.394	3334.
150.	.01343	1373.71	209.78	-63.591	-59.862	.66355	.233	.394	3277.
155.	.01357	1305.34	201.30	-61.661	-57.893	.67646	.230	.394	3219.
160.	.01371	1238.25	193.06	-59.730	-55.922	.68897	.227	.394	3159.
165.	.01386	1172.58	185.03	-57.799	-53.950	.70111	.223	.395	3098.
170.	.01401	1108.41	177.19	-55.866	-51.974	.71291	.220	.395	3036.
175.	.01417	1045.87	169.53	-53.931	-49.995	.72438	.217	.396	2972.
180.	.01434	985.06	162.04	-51.993	-48.010	.73556	.215	.397	2906.
185.	.01451	926.08	154.71	-50.050	-46.019	.74647	.212	.399	2838.
190.	.01469	869.01	147.55	-48.101	-44.020	.75714	.211	.401	2768.
195.	.01488	813.91	140.55	-46.144	-42.011	.76758	.209	.403	2697.
200.	.01507	760.85	133.73	-44.177	-39.990	.77781	.208	.406	2623.
205.	.01528	709.83	127.09	-42.198	-37.955	.78787	.207	.409	2548.
210.	.01549	660.84	120.67	-40.206	-35.903	.79776	.207	.412	2472.
215.	.01572	613.82	114.47	-38.197	-33.832	.80751	.206	.416	2396.
220.	.01595	568.65	108.53	-36.171	-31.740	.81712	.205	.420	2321.
225.	.01620	525.13	102.89	-34.129	-29.628	.82661	.203	.424	2252.
230.	.01647	482.98	97.58	-32.073	-27.499	.83596	.199	.426	2192.
235.	.01676	440.98	92.94	-29.988	-25.334	.84528	.199	.438	2122.
240.	.01706	401.95	87.79	-27.867	-23.127	.85457	.198	.446	2048.
245.	.01739	364.42	82.62	-25.710	-20.879	.86384	.197	.454	1972.
250.	.01775	328.77	77.61	-23.522	-18.593	.87308	.196	.463	1898.
255.	.01814	294.66	72.70	-21.291	-16.254	.88234	.194	.473	1822.
260.	.01856	261.63	67.91	-19.012	-13.856	.89165	.193	.486	1745.
265.	.01903	230.48	63.12	-16.680	-11.393	.90104	.193	.500	1664.
270.	.01956	200.92	58.39	-14.288	-8.856	.91052	.192	.517	1582.
275.	.02015	173.26	53.87	-11.821	-6.225	.92018	.192	.533	1500.
280.	.02082	147.29	49.40	-9.261	-3.478	.93007	.192	.565	1416.
285.	.02161	123.80	44.97	-6.582	-.581	.94033	.193	.595	1331.
290.	.02253	102.22	40.60	-3.744	2.514	.95111	.196	.635	1239.
295.	.02364	83.23	36.35	-.759	5.807	.96237	.199	.684	1150.
300.	.02499	67.34	32.22	2.412	9.352	.97428	.202	.736	1067.
310.	.02866	45.97	24.74	9.254	17.213	1.00005	.203	.831	933.
320.	.03373	38.18	18.86	16.239	25.608	1.02671	.200	.828	856.
330.	.03951	40.01	14.82	22.402	33.377	1.05062	.194	.717	829.
340.	.04514	46.05	12.23	27.432	39.969	1.07031	.187	.604	823.
350.	.05034	53.47	10.50	31.598	45.580	1.08658	.183	.521	840.
360.	.05512	61.16	9.26	35.178	50.489	1.10042	.179	.463	855.
370.	.05957	68.74	8.33	38.360	54.905	1.11252	.177	.422	872.
380.	.06374	76.12	7.60	41.263	58.969	1.12336	.175	.391	889.
390.	.06769	83.23	7.00	43.957	62.759	1.13321	.173	.368	906.
400.	.07146	90.06	6.51	46.493	66.341	1.14228	.172	.350	922.
410.	.07508	96.51	6.09	48.902	69.751	1.15071	.170	.334	937.
420.	.07855	102.87	5.73	51.212	73.031	1.15861	.169	.322	953.
430.	.08194	109.02	5.42	53.441	76.200	1.16607	.168	.312	969.
440.	.08523	115.00	5.15	55.600	79.274	1.17314	.167	.303	984.
450.	.08844	120.81	4.91	57.701	82.268	1.17986	.166	.296	999.
460.	.09159	126.47	4.69	59.753	85.192	1.18629	.165	.289	1013.
470.	.09467	132.00	4.50	61.761	88.056	1.19245	.164	.284	1028.
480.	.09769	137.41	4.32	63.731	90.867	1.19837	.163	.279	1042.
490.	.10067	142.70	4.16	65.669	93.631	1.20407	.163	.274	1056.
500.	.10361	147.90	4.01	67.577	96.354	1.20957	.162	.270	1069.
510.	.10650	153.00	3.88	69.459	99.041	1.21489	.162	.267	1082.
520.	.10936	158.02	3.76	71.319	101.695	1.22004	.161	.264	1095.
530.	.11219	162.97	3.64	73.158	104.319	1.22504	.160	.261	1108.
540.	.11499	167.85	3.54	74.978	106.918	1.22990	.160	.259	1121.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

1600. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	Cv BTU/LB-R	Cp BTU/LB-R	VELOCITY OF SOUND FT/S
* 100.109	.01219	2113.94	320.55	-82.980	-79.367	.50351	.263	.397	3846.
105.	.01231	2033.17	306.01	-81.075	-77.429	.52241	.261	.396	3787.
110.	.01242	1963.44	292.48	-79.130	-75.450	.54083	.259	.395	3730.
115.	.01254	1888.36	280.04	-77.188	-73.474	.55839	.256	.395	3674.
120.	.01265	1813.92	268.45	-75.249	-71.500	.57519	.253	.395	3619.
125.	.01277	1740.15	257.57	-73.313	-69.528	.59129	.250	.394	3564.
130.	.01289	1667.11	247.28	-71.379	-67.559	.60674	.247	.394	3509.
135.	.01302	1594.86	237.47	-69.448	-65.590	.62160	.244	.394	3454.
140.	.01315	1523.48	228.08	-67.518	-63.623	.63591	.240	.393	3399.
145.	.01328	1453.07	219.04	-65.590	-61.656	.64971	.237	.393	3343.
150.	.01341	1383.74	210.30	-63.664	-59.690	.66304	.234	.393	3286.
155.	.01355	1315.58	201.84	-61.738	-57.723	.67594	.230	.393	3228.
160.	.01369	1248.72	193.62	-59.812	-55.755	.68843	.227	.394	3169.
165.	.01384	1183.27	185.61	-57.886	-53.785	.70055	.224	.394	3108.
170.	.01400	1119.32	177.79	-55.960	-51.813	.71233	.221	.395	3046.
175.	.01415	1057.01	170.16	-54.031	-49.837	.72378	.218	.396	2983.
180.	.01432	996.42	162.69	-52.099	-47.857	.73494	.215	.397	2918.
185.	.01449	937.66	155.39	-50.163	-45.871	.74583	.213	.398	2850.
190.	.01467	880.80	148.26	-48.222	-43.877	.75646	.211	.400	2781.
195.	.01485	825.92	141.30	-46.273	-41.873	.76687	.209	.402	2710.
200.	.01504	773.06	134.51	-44.315	-39.858	.77708	.208	.404	2638.
205.	.01524	722.24	127.91	-42.346	-37.830	.78710	.207	.407	2563.
210.	.01546	673.44	121.52	-40.364	-35.785	.79696	.207	.411	2488.
215.	.01568	626.61	115.36	-38.367	-33.723	.80666	.206	.414	2413.
220.	.01591	581.62	109.45	-36.355	-31.641	.81623	.206	.418	2340.
225.	.01615	538.28	103.84	-34.327	-29.541	.82567	.204	.421	2272.
230.	.01641	496.32	98.56	-32.288	-27.425	.83496	.199	.423	2213.
235.	.01669	454.43	93.97	-30.224	-25.278	.84420	.199	.435	2145.
240.	.01699	415.68	88.91	-28.125	-23.091	.85341	.198	.442	2073.
245.	.01731	378.33	83.80	-25.993	-20.864	.86259	.197	.450	1999.
250.	.01765	342.97	78.83	-23.833	-18.603	.87173	.196	.457	1926.
255.	.01803	309.08	73.94	-21.635	-16.294	.88087	.195	.466	1852.
260.	.01843	276.20	69.27	-19.395	-13.934	.89004	.194	.478	1777.
265.	.01888	245.34	64.61	-17.110	-11.516	.89925	.193	.490	1701.
270.	.01937	216.03	59.96	-14.774	-9.033	.90853	.192	.504	1621.
275.	.01992	188.60	55.54	-12.375	-6.472	.91793	.192	.523	1543.
280.	.02054	162.81	51.22	-9.902	-3.815	.92750	.192	.544	1463.
285.	.02126	139.32	46.94	-7.329	-1.031	.93736	.192	.569	1384.
290.	.02208	117.64	42.73	-4.627	1.914	.94762	.195	.601	1296.
295.	.02304	98.28	38.66	-1.817	5.008	.95820	.198	.639	1212.
300.	.02417	81.65	34.71	1.135	8.297	.96925	.200	.679	1133.
310.	.02714	57.51	27.45	7.427	15.469	.99276	.201	.755	1001.
320.	.03128	45.58	21.45	13.952	23.197	1.01729	.199	.781	911.
330.	.03609	43.63	17.00	20.065	30.757	1.04057	.193	.720	868.
340.	.04115	47.39	13.96	25.298	37.490	1.06068	.188	.626	855.
350.	.04600	53.61	11.89	29.705	43.335	1.07762	.184	.545	859.
360.	.05054	60.70	10.41	33.495	48.470	1.09210	.180	.485	870.
370.	.05479	67.97	9.31	36.849	53.081	1.10473	.178	.440	883.
380.	.05879	75.19	8.45	39.892	57.309	1.11601	.176	.406	898.
390.	.06257	82.24	7.76	42.700	61.238	1.12622	.174	.381	914.
400.	.06618	89.08	7.19	45.331	64.938	1.13559	.172	.361	929.
410.	.06963	95.67	6.72	47.823	68.453	1.14427	.171	.344	945.
420.	.07296	102.07	6.31	50.205	71.822	1.15239	.170	.331	960.
430.	.07619	108.18	5.94	52.494	75.067	1.16003	.169	.319	974.
440.	.07933	114.22	5.63	54.706	78.210	1.16726	.167	.310	989.
450.	.08239	120.11	5.36	56.853	81.265	1.17412	.166	.302	1004.
460.	.08539	125.85	5.11	58.946	84.244	1.18067	.166	.295	1018.
470.	.08832	131.46	4.89	60.991	87.158	1.18694	.165	.288	1033.
480.	.09120	136.94	4.70	62.994	90.014	1.19295	.164	.283	1047.
490.	.09403	142.31	4.52	64.961	92.819	1.19874	.163	.278	1061.
500.	.09682	147.58	4.36	66.896	95.580	1.20431	.162	.274	1074.
510.	.09956	152.76	4.21	68.802	98.301	1.20970	.162	.270	1087.
520.	.10228	157.85	4.07	70.684	100.986	1.21492	.161	.267	1101.
530.	.10496	162.87	3.94	72.542	103.640	1.21997	.161	.264	1114.
540.	.10762	167.82	3.83	74.381	106.265	1.22488	.160	.261	1126.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

1700. PSIA, ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 100.250	.01219	2119.70	320.59	-82.965	-79.128	.50365	.263	.397	3849.
105.	.01230	2047.28	306.48	-81.117	-77.245	.52199	.261	.396	3793.
110.	.01241	1971.75	292.95	-79.174	-75.267	.54040	.259	.395	3736.
115.	.01253	1896.87	280.51	-77.235	-73.291	.55796	.256	.395	3680.
120.	.01264	1822.64	268.93	-75.299	-71.318	.57476	.253	.394	3625.
125.	.01276	1749.08	258.05	-73.366	-69.348	.59084	.250	.394	3571.
130.	.01288	1676.25	247.76	-71.435	-67.379	.60629	.247	.394	3516.
135.	.01301	1604.20	237.96	-69.507	-65.412	.62113	.244	.393	3462.
140.	.01314	1533.03	228.58	-67.582	-63.447	.63543	.241	.393	3406.
145.	.01327	1462.84	219.55	-65.658	-61.482	.64922	.237	.393	3351.
150.	.01340	1393.72	210.83	-63.735	-59.517	.66254	.234	.393	3294.
155.	.01354	1325.78	202.38	-61.814	-57.553	.67542	.230	.393	3236.
160.	.01368	1259.13	194.17	-59.894	-55.587	.68790	.227	.393	3178.
165.	.01383	1193.90	186.18	-57.973	-53.621	.70000	.224	.393	3118.
170.	.01398	1130.17	178.39	-56.052	-51.652	.71175	.221	.394	3057.
175.	.01413	1068.07	170.78	-54.129	-49.679	.72319	.218	.395	2994.
180.	.01430	1007.70	163.34	-52.204	-47.703	.73432	.215	.396	2929.
185.	.01447	949.15	156.07	-50.275	-45.721	.74519	.213	.397	2863.
190.	.01464	892.50	148.96	-48.341	-43.732	.75580	.211	.399	2794.
195.	.01482	837.82	142.03	-46.400	-41.734	.76618	.210	.401	2724.
200.	.01501	785.16	135.27	-44.451	-39.725	.77636	.208	.403	2652.
205.	.01521	734.53	128.71	-42.492	-37.703	.78634	.208	.406	2579.
210.	.01542	685.92	122.35	-40.520	-35.666	.79616	.207	.409	2505.
215.	.01564	639.27	116.23	-38.534	-33.612	.80583	.207	.412	2431.
220.	.01587	594.45	110.35	-36.534	-31.539	.81536	.206	.416	2359.
225.	.01611	551.28	104.77	-34.520	-29.450	.82475	.204	.419	2291.
230.	.01636	509.50	99.51	-32.497	-27.347	.83398	.199	.420	2234.
235.	.01663	467.72	95.00	-30.453	-25.217	.84314	.199	.431	2167.
240.	.01692	429.24	89.98	-28.374	-23.047	.85228	.198	.439	2096.
245.	.01723	392.03	84.94	-26.265	-20.841	.86138	.197	.445	2024.
250.	.01756	356.94	80.01	-24.132	-18.603	.87042	.196	.452	1953.
255.	.01792	323.22	75.13	-21.963	-16.321	.87946	.195	.460	1880.
260.	.01832	290.48	70.55	-19.760	-13.994	.88850	.194	.470	1808.
265.	.01874	259.88	66.01	-17.516	-11.616	.89756	.193	.482	1734.
270.	.01921	230.78	61.45	-15.228	-9.182	.90666	.192	.494	1658.
275.	.01972	203.56	57.10	-12.889	-6.680	.91584	.192	.509	1582.
280.	.02030	177.93	52.91	-10.488	-4.098	.92514	.191	.528	1507.
285.	.02095	154.40	48.75	-8.002	-1.406	.93467	.191	.548	1431.
290.	.02169	132.66	44.68	-5.409	1.420	.94452	.194	.574	1348.
295.	.02254	113.01	40.74	-2.733	4.363	.95458	.197	.605	1268.
300.	.02353	95.83	36.94	.054	7.461	.96499	.199	.637	1193.
310.	.02603	69.63	29.87	5.934	14.128	.98685	.199	.698	1063.
320.	.02936	54.51	23.86	12.049	21.292	1.00959	.197	.731	967.
330.	.03347	49.05	19.15	17.980	28.516	1.03183	.193	.705	911.
340.	.03794	50.25	15.74	23.286	35.231	1.05188	.188	.635	887.
350.	.04240	54.91	13.35	27.865	41.214	1.06923	.184	.562	882.
360.	.04667	61.13	11.63	31.835	46.526	1.08420	.181	.502	887.
370.	.05069	67.89	10.35	35.347	51.305	1.09729	.178	.456	897.
380.	.05451	74.82	9.36	38.523	55.683	1.10897	.176	.421	910.
390.	.05813	81.71	8.56	41.444	59.743	1.11952	.174	.393	924.
400.	.06158	88.50	7.91	44.170	63.556	1.12918	.173	.371	938.
410.	.06485	95.09	7.36	46.742	67.169	1.13810	.172	.354	953.
420.	.06808	101.52	6.90	49.193	70.625	1.14643	.170	.339	968.
430.	.07117	107.79	6.49	51.545	73.950	1.15426	.169	.327	982.
440.	.07417	113.90	6.14	53.813	77.161	1.16164	.168	.317	997.
450.	.07709	119.62	5.82	56.007	80.275	1.16865	.167	.307	1010.
460.	.07995	125.42	5.55	58.140	83.309	1.17531	.166	.300	1024.
470.	.08275	131.09	5.30	60.222	86.272	1.18169	.165	.293	1038.
480.	.08550	136.64	5.09	62.259	89.173	1.18779	.164	.287	1052.
490.	.08820	142.07	4.89	64.255	92.019	1.19366	.163	.282	1066.
500.	.09085	147.41	4.71	66.217	94.816	1.19931	.163	.278	1080.
510.	.09347	152.65	4.54	68.147	97.571	1.20477	.162	.273	1093.
520.	.09605	157.81	4.39	70.050	100.287	1.21004	.161	.270	1106.
530.	.09861	162.89	4.25	71.929	102.969	1.21515	.161	.267	1119.
540.	.10113	167.90	4.12	73.785	105.621	1.22011	.160	.264	1132.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

1800. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 100.390	.01219	2125.46	320.62	-82.950	-78.888	.50379	.263	.397	3353.
105.	.01229	2055.37	306.95	-81.158	-77.061	.52158	.261	.396	3799.
110.	.01240	1980.04	293.43	-79.218	-75.083	.53998	.259	.395	3742.
115.	.01252	1905.37	280.98	-77.281	-73.109	.55754	.256	.395	3686.
120.	.01264	1831.34	269.40	-75.348	-71.137	.57432	.254	.394	3632.
125.	.01275	1757.98	258.53	-73.418	-69.167	.59040	.251	.394	3577.
130.	.01287	1685.35	248.25	-71.491	-67.200	.60583	.247	.393	3523.
135.	.01300	1613.51	238.45	-69.566	-65.234	.62067	.244	.393	3469.
140.	.01312	1542.55	229.08	-67.644	-63.270	.63495	.241	.393	3414.
145.	.01325	1472.56	220.06	-65.724	-61.307	.64873	.237	.392	3359.
150.	.01339	1403.65	211.35	-63.806	-59.344	.66203	.234	.392	3302.
155.	.01352	1335.93	202.92	-61.890	-57.382	.67490	.231	.392	3245.
160.	.01366	1269.49	194.72	-59.974	-55.419	.68736	.227	.393	3187.
165.	.01381	1204.47	186.75	-58.059	-53.455	.69945	.224	.393	3128.
170.	.01396	1140.96	178.98	-56.143	-51.490	.71119	.221	.393	3067.
175.	.01412	1079.07	171.39	-54.226	-49.521	.72260	.218	.394	3004.
180.	.01428	1018.90	163.97	-52.307	-47.548	.73371	.216	.395	2940.
185.	.01444	960.56	156.73	-50.385	-45.571	.74455	.213	.396	2874.
190.	.01462	904.11	149.66	-48.458	-43.586	.75514	.211	.398	2807.
195.	.01480	849.63	142.75	-46.526	-41.593	.76549	.210	.400	2737.
200.	.01499	797.16	136.03	-44.585	-39.590	.77564	.209	.402	2666.
205.	.01518	746.72	129.50	-42.634	-37.574	.78560	.208	.405	2594.
210.	.01539	698.29	123.17	-40.672	-35.544	.79538	.208	.408	2520.
215.	.01560	651.80	117.08	-38.697	-33.498	.80502	.207	.411	2448.
220.	.01582	607.15	111.23	-36.709	-31.434	.81450	.206	.414	2377.
225.	.01606	564.15	105.68	-34.708	-29.355	.82384	.204	.417	2310.
230.	.01631	522.53	100.44	-32.700	-27.265	.83302	.199	.418	2254.
235.	.01658	480.88	96.01	-30.676	-25.151	.84212	.199	.428	2189.
240.	.01686	442.64	91.01	-28.616	-22.997	.85118	.199	.435	2119.
245.	.01716	405.54	86.05	-26.529	-20.810	.86021	.198	.441	2049.
250.	.01748	370.69	81.17	-24.420	-18.594	.86916	.196	.448	1979.
255.	.01783	337.12	76.33	-22.278	-16.336	.87810	.195	.454	1908.
260.	.01820	304.49	71.78	-20.108	-14.040	.88702	.194	.464	1837.
265.	.01861	274.12	67.33	-17.901	-11.698	.89594	.193	.474	1766.
270.	.01905	245.21	62.90	-15.656	-9.306	.90489	.192	.485	1694.
275.	.01954	218.16	58.58	-13.368	-6.855	.91388	.192	.497	1620.
280.	.02008	192.69	54.48	-11.029	-4.336	.92296	.191	.513	1548.
285.	.02068	169.11	50.43	-8.616	-1.722	.93221	.191	.531	1476.
290.	.02136	147.31	46.49	-6.112	1.008	.94172	.194	.553	1396.
295.	.02213	127.45	42.65	-3.544	3.831	.95138	.196	.578	1319.
300.	.02300	109.84	38.96	-.886	6.781	.96129	.198	.604	1247.
310.	.02516	82.04	32.07	4.677	13.064	.98189	.198	.653	1120.
320.	.02798	64.41	26.10	10.449	19.774	1.00319	.196	.696	1022.
330.	.03146	55.92	21.24	16.152	26.637	1.02431	.192	.680	957.
340.	.03537	54.51	17.55	21.431	33.222	1.04397	.188	.633	922.
350.	.03942	57.38	14.86	26.110	39.249	1.06145	.184	.572	909.
360.	.04339	62.48	12.90	30.220	44.681	1.07676	.181	.515	908.
370.	.04719	68.55	11.44	33.868	49.595	1.09023	.179	.470	914.
380.	.05081	75.05	10.30	37.167	54.104	1.10225	.177	.433	924.
390.	.05427	81.69	9.39	40.194	58.282	1.11311	.175	.405	935.
400.	.05757	88.34	8.65	43.013	62.203	1.12304	.174	.382	949.
410.	.06074	94.89	8.03	45.665	65.910	1.13220	.172	.363	962.
420.	.06380	101.31	7.51	48.185	69.450	1.14073	.171	.347	976.
430.	.06676	107.58	7.05	50.597	72.849	1.14873	.170	.334	990.
440.	.06963	113.71	6.66	52.918	76.128	1.15627	.169	.323	1004.
450.	.07243	119.72	6.32	55.163	79.305	1.16341	.168	.313	1018.
460.	.07516	125.18	6.00	57.338	82.389	1.17019	.167	.305	1030.
470.	.07783	130.90	5.73	59.456	85.399	1.17667	.166	.298	1044.
480.	.08046	136.50	5.48	61.526	88.344	1.18287	.165	.291	1058.
490.	.08304	141.99	5.27	63.552	91.230	1.18882	.164	.286	1072.
500.	.08558	147.38	5.07	65.540	94.064	1.19454	.163	.281	1085.
510.	.08808	152.67	4.89	67.495	96.852	1.20006	.162	.277	1099.
520.	.09054	157.89	4.72	69.419	99.599	1.20540	.161	.273	1112.
530.	.09298	163.03	4.57	71.317	102.309	1.21056	.161	.269	1125.
540.	.09539	168.10	4.43	73.192	104.986	1.21557	.160	.266	1138.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

1900. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 100.530	.01218	2131.20	320.66	-82.935	-78.648	.50393	.263	.397	3857.
105.	.01228	2063.44	307.42	-81.199	-76.878	.52116	.261	.396	3804.
110.	.01240	1988.31	293.89	-79.262	-74.900	.53956	.259	.395	3748.
115.	.01251	1913.84	281.45	-77.328	-72.926	.55711	.257	.395	3692.
120.	.01263	1840.01	269.87	-75.397	-70.955	.57389	.254	.394	3638.
125.	.01274	1766.85	259.01	-73.470	-68.986	.58996	.251	.393	3584.
130.	.01286	1694.42	248.73	-71.546	-67.020	.60538	.248	.393	3530.
135.	.01299	1622.78	238.94	-69.625	-65.056	.62021	.244	.393	3476.
140.	.01311	1552.03	229.57	-67.707	-63.093	.63448	.241	.392	3422.
145.	.01324	1482.25	220.56	-65.791	-61.132	.64825	.238	.392	3367.
150.	.01337	1413.55	211.87	-63.877	-59.171	.66154	.234	.392	3311.
155.	.01351	1346.03	203.45	-61.964	-57.211	.67439	.231	.392	3254.
160.	.01365	1279.80	195.27	-60.053	-55.251	.68684	.228	.392	3196.
165.	.01379	1214.98	187.32	-58.143	-53.290	.69890	.224	.392	3137.
170.	.01394	1151.68	179.56	-56.233	-51.327	.71062	.221	.393	3077.
175.	.01410	1090.00	171.99	-54.322	-49.362	.72202	.219	.393	3015.
180.	.01426	1030.04	164.61	-52.409	-47.393	.73311	.216	.394	2951.
185.	.01442	971.89	157.39	-50.494	-45.419	.74393	.214	.395	2886.
190.	.01459	915.64	150.34	-48.574	-43.439	.75449	.212	.397	2819.
195.	.01477	861.36	143.47	-46.649	-41.451	.76482	.210	.399	2750.
200.	.01496	809.07	136.77	-44.716	-39.454	.77494	.209	.401	2680.
205.	.01515	758.80	130.27	-42.775	-37.444	.78486	.208	.403	2608.
210.	.01535	710.54	123.98	-40.822	-35.421	.79462	.208	.406	2536.
215.	.01556	664.22	117.91	-38.857	-33.382	.80421	.207	.409	2464.
220.	.01578	619.72	112.10	-36.880	-31.327	.81366	.207	.412	2394.
225.	.01601	576.88	106.57	-34.892	-29.258	.82296	.204	.415	2329.
230.	.01626	535.42	101.35	-32.898	-27.179	.83209	.199	.415	2273.
235.	.01652	493.90	96.99	-30.893	-25.081	.84111	.199	.426	2210.
240.	.01679	455.88	92.00	-28.851	-22.942	.85012	.199	.432	2141.
245.	.01709	418.87	87.11	-26.784	-20.772	.85907	.198	.438	2073.
250.	.01740	384.24	82.29	-24.696	-18.574	.86795	.196	.444	2005.
255.	.01774	350.80	77.53	-22.580	-16.340	.87679	.195	.450	1935.
260.	.01810	318.27	72.96	-20.440	-14.073	.88560	.194	.458	1865.
265.	.01849	288.10	68.59	-18.267	-11.762	.89440	.193	.467	1797.
270.	.01891	259.36	64.27	-16.062	-9.408	.90321	.192	.477	1727.
275.	.01937	232.46	60.00	-13.818	-7.002	.91204	.192	.488	1656.
280.	.01988	207.14	55.97	-11.532	-4.538	.92091	.191	.501	1586.
285.	.02044	183.48	52.00	-9.183	-1.990	.92994	.191	.516	1516.
290.	.02107	161.63	48.17	-6.753	.660	.93917	.193	.536	1440.
295.	.02177	141.60	44.42	-4.274	3.386	.94849	.196	.556	1366.
300.	.02256	123.66	40.82	-1.719	6.218	.95801	.197	.578	1296.
310.	.02446	94.58	34.08	3.592	12.199	.97762	.197	.619	1173.
320.	.02689	74.92	28.17	9.081	18.543	.99776	.195	.649	1075.
330.	.02988	63.88	23.23	14.556	25.070	1.01784	.192	.653	1004.
340.	.03331	59.99	19.33	19.746	31.466	1.03694	.188	.623	960.
350.	.03695	60.95	16.39	24.460	37.462	1.05433	.184	.574	938.
360.	.04061	64.74	14.21	28.666	42.955	1.06981	.181	.524	931.
370.	.04417	69.97	12.56	32.426	47.967	1.08354	.179	.480	933.
380.	.04761	75.91	11.28	35.834	52.583	1.09585	.177	.444	939.
390.	.05090	82.20	10.26	38.960	56.866	1.10698	.175	.415	949.
400.	.05405	88.63	9.42	41.866	60.884	1.11716	.174	.391	960.
410.	.05709	95.07	8.73	44.595	64.680	1.12653	.173	.371	973.
420.	.06002	101.43	8.14	47.183	68.299	1.13526	.172	.355	986.
430.	.06286	107.68	7.63	49.655	71.771	1.14343	.170	.341	999.
440.	.06562	113.79	7.20	52.029	75.114	1.15112	.169	.329	1012.
450.	.06830	119.80	6.81	54.320	78.350	1.15839	.168	.319	1026.
460.	.07092	125.59	6.47	56.539	81.490	1.16530	.167	.310	1039.
470.	.07348	131.29	6.17	58.697	84.551	1.17188	.166	.302	1053.
480.	.07598	136.52	5.89	60.796	87.529	1.17815	.165	.295	1064.
490.	.07845	142.05	5.65	62.852	90.453	1.18418	.164	.290	1078.
500.	.08088	147.49	5.44	64.867	93.323	1.18998	.163	.284	1092.
510.	.08327	152.83	5.24	66.845	96.144	1.19557	.162	.280	1105.
520.	.08564	158.09	5.06	68.791	98.920	1.20096	.161	.276	1118.
530.	.08797	163.28	4.89	70.709	101.658	1.20617	.161	.272	1131.
540.	.09027	168.40	4.74	72.601	104.361	1.21123	.160	.269	1144.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

2000. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	Cv BTU/LB-R	Cp BTU/LB-R	VELOCITY OF SOUND FT/S
* 103.671	.01218	2135.94	320.69	-82.919	-78.409	.50407	.263	.396	3860.
105.	.01223	2071.49	307.89	-81.240	-76.694	.52074	.262	.396	3810.
110.	.01239	1896.56	284.36	-79.305	-74.717	.53914	.259	.395	3753.
115.	.01256	1822.28	281.92	-77.374	-72.743	.55668	.257	.394	3699.
120.	.01262	1843.65	270.34	-75.446	-70.773	.57345	.254	.394	3644.
125.	.01274	1775.69	259.42	-73.522	-68.805	.58952	.251	.393	3591.
130.	.01288	1703.46	249.20	-71.601	-66.840	.60493	.248	.393	3537.
135.	.01293	1632.63	239.42	-69.683	-64.877	.61975	.244	.392	3483.
140.	.01310	1561.47	230.06	-67.768	-62.916	.63401	.241	.392	3429.
145.	.01323	1491.89	221.06	-65.856	-60.957	.64776	.238	.392	3374.
150.	.01338	1423.39	212.38	-63.946	-58.998	.66104	.234	.392	3319.
155.	.01356	1356.08	203.97	-62.039	-57.040	.67388	.231	.391	3263.
160.	.01364	1290.06	195.81	-60.132	-55.082	.68631	.228	.392	3205.
165.	.01378	1225.45	187.88	-58.227	-53.124	.69836	.225	.392	3147.
170.	.01393	1162.34	180.14	-56.322	-51.164	.71006	.222	.392	3087.
175.	.01403	1100.96	172.60	-54.417	-49.202	.72144	.219	.393	3025.
180.	.01424	1041.10	165.23	-52.513	-47.237	.73251	.216	.393	2962.
185.	.01441	983.15	158.04	-50.601	-45.267	.74330	.214	.394	2898.
190.	.01457	927.09	151.01	-48.688	-43.292	.75384	.212	.396	2831.
195.	.01475	872.99	144.17	-46.770	-41.309	.76415	.211	.398	2763.
200.	.01493	820.88	137.50	-44.846	-39.316	.77424	.210	.400	2694.
205.	.01512	770.79	131.03	-42.912	-37.312	.78414	.209	.402	2623.
210.	.01532	722.69	124.77	-40.969	-35.295	.79386	.208	.405	2551.
215.	.01553	676.52	118.73	-39.014	-33.264	.80342	.208	.408	2480.
220.	.01574	632.17	112.94	-37.048	-31.217	.81283	.207	.411	2411.
225.	.01597	589.47	107.44	-35.071	-29.157	.82209	.205	.413	2347.
230.	.01621	548.17	102.24	-33.092	-27.089	.83117	.200	.413	2292.
235.	.01647	508.79	97.94	-31.104	-25.006	.84013	.200	.423	2230.
240.	.01673	468.96	92.97	-29.079	-22.881	.84908	.199	.428	2162.
245.	.01702	432.04	88.15	-27.031	-20.728	.85796	.198	.434	2095.
250.	.01732	397.60	83.38	-24.964	-18.549	.86676	.197	.440	2029.
255.	.01765	364.27	78.69	-22.872	-16.336	.87553	.195	.445	1961.
260.	.01800	331.92	74.10	-20.758	-14.093	.88424	.194	.452	1892.
265.	.01837	301.64	69.83	-18.616	-11.812	.89293	.193	.461	1826.
270.	.01878	273.26	65.57	-16.446	-9.492	.90160	.192	.470	1759.
275.	.01922	246.48	61.36	-14.242	-7.125	.91029	.191	.479	1690.
280.	.01970	221.30	57.37	-12.003	-4.709	.91900	.191	.490	1622.
285.	.02023	197.56	53.50	-9.709	-2.217	.92782	.191	.503	1555.
290.	.02081	175.65	49.73	-7.343	.364	.93681	.193	.520	1481.
295.	.02146	155.49	46.08	-4.937	3.009	.94585	.195	.539	1409.
300.	.02218	137.27	42.55	-2.469	5.744	.95505	.196	.557	1342.
310.	.02388	107.15	35.94	2.636	11.481	.97386	.196	.591	1223.
320.	.02602	85.83	30.09	7.891	17.528	.99306	.194	.618	1124.
330.	.02883	72.62	25.10	13.156	23.758	1.01223	.191	.626	1049.
340.	.03164	66.48	21.07	18.228	29.946	1.03070	.188	.609	1000.
350.	.03491	65.52	17.93	22.928	35.857	1.04784	.184	.572	971.
360.	.03827	67.88	15.53	27.190	41.362	1.06335	.181	.528	957.
370.	.04159	72.14	13.71	31.033	46.434	1.07725	.179	.488	954.
380.	.04482	77.41	12.29	34.532	51.131	1.08978	.177	.453	957.
390.	.04794	83.25	11.15	37.746	55.502	1.10114	.176	.424	964.
400.	.05096	89.38	10.22	40.734	59.606	1.11153	.175	.399	973.
410.	.05386	95.64	9.45	43.536	63.484	1.12111	.173	.379	984.
420.	.05667	101.89	8.79	46.190	67.178	1.13001	.172	.362	996.
430.	.05940	108.08	8.23	48.720	70.717	1.13835	.171	.347	1008.
440.	.06204	114.14	7.75	51.145	74.122	1.14618	.170	.335	1021.
450.	.06462	120.12	7.33	53.483	77.415	1.15358	.169	.324	1034.
460.	.06713	125.90	6.95	55.744	80.606	1.16059	.168	.315	1047.
470.	.06959	131.60	6.62	57.939	83.712	1.16728	.167	.307	1060.
480.	.07200	137.23	6.32	60.075	86.741	1.17366	.165	.299	1073.
490.	.07437	142.74	6.05	62.160	89.702	1.17976	.164	.293	1086.
500.	.07668	147.74	5.81	64.197	92.595	1.18561	.163	.288	1098.
510.	.07898	153.12	5.60	66.199	95.447	1.19126	.162	.283	1112.
520.	.08124	158.42	5.40	68.167	98.253	1.19671	.162	.278	1125.
530.	.08347	163.65	5.22	70.104	101.018	1.20197	.161	.275	1138.
540.	.08568	168.82	5.05	72.013	103.746	1.20707	.160	.271	1151.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

2200. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 100.948	.01217	2148.45	320.78	-82.889	-77.931	.50433	.264	.396	3868.
105.	.01226	2087.52	308.82	-81.321	-76.326	.51992	.262	.396	3821.
110.	.01237	2012.98	295.29	-79.391	-74.350	.53830	.260	.395	3765.
115.	.01249	1939.09	282.85	-77.465	-72.378	.55584	.257	.394	3711.
120.	.01260	1865.85	271.28	-75.542	-70.409	.57260	.254	.393	3657.
125.	.01272	1793.29	260.42	-73.624	-68.443	.58864	.251	.393	3604.
130.	.01284	1721.45	250.15	-71.709	-66.480	.60404	.248	.392	3551.
135.	.01296	1650.41	240.38	-69.798	-64.520	.61884	.245	.392	3498.
140.	.01308	1580.25	231.04	-67.890	-62.562	.63308	.242	.391	3444.
145.	.01321	1511.07	222.06	-65.986	-60.605	.64681	.238	.391	3390.
150.	.01334	1442.96	213.40	-64.084	-58.651	.66006	.235	.391	3335.
155.	.01347	1376.05	205.02	-62.184	-56.697	.67287	.232	.391	3280.
160.	.01361	1310.42	196.89	-60.287	-54.744	.68527	.228	.391	3223.
165.	.01375	1246.21	188.98	-58.391	-52.791	.69729	.225	.391	3165.
170.	.01389	1183.50	181.28	-56.497	-50.837	.70896	.222	.391	3106.
175.	.01404	1122.41	173.78	-54.602	-48.881	.72030	.219	.391	3046.
180.	.01420	1063.03	166.45	-52.707	-46.923	.73133	.217	.392	2984.
185.	.01436	1005.45	159.31	-50.811	-44.961	.74208	.215	.393	2921.
190.	.01453	949.76	152.34	-48.911	-42.994	.75258	.213	.394	2855.
195.	.01470	896.00	145.54	-47.008	-41.020	.76283	.211	.396	2789.
200.	.01488	844.23	138.93	-45.098	-39.037	.77287	.210	.397	2721.
205.	.01506	794.46	132.52	-43.181	-37.045	.78272	.209	.400	2651.
210.	.01526	746.67	126.31	-41.255	-35.040	.79238	.209	.402	2581.
215.	.01546	700.79	120.33	-39.319	-33.022	.80188	.208	.405	2512.
220.	.01567	656.73	114.59	-37.373	-30.990	.81122	.207	.407	2444.
225.	.01589	614.31	109.13	-35.419	-28.947	.82040	.205	.409	2382.
230.	.01612	573.29	103.96	-33.465	-26.900	.82939	.200	.409	2329.
235.	.01636	532.20	99.72	-31.509	-24.844	.83823	.200	.418	2269.
240.	.01662	494.71	94.87	-29.516	-22.746	.84707	.200	.423	2204.
245.	.01689	457.91	90.11	-27.503	-20.623	.85582	.198	.428	2139.
250.	.01718	423.80	85.44	-25.474	-18.476	.86450	.197	.432	2075.
255.	.01748	390.65	80.87	-23.425	-16.302	.87311	.196	.437	2011.
260.	.01781	358.35	76.32	-21.359	-14.103	.88165	.195	.443	1944.
265.	.01816	328.69	72.08	-19.271	-11.873	.89015	.193	.449	1880.
270.	.01853	300.36	67.98	-17.162	-9.611	.89860	.193	.457	1817.
275.	.01894	273.79	63.95	-15.026	-7.311	.90704	.192	.464	1753.
280.	.01937	248.85	60.02	-12.865	-4.974	.91547	.191	.473	1689.
285.	.01985	224.93	56.25	-10.662	-2.577	.92395	.190	.483	1626.
290.	.02036	202.90	52.61	-8.400	-.105	.93257	.193	.497	1556.
295.	.02092	162.54	49.16	-6.113	2.411	.94117	.195	.511	1488.
300.	.02154	163.91	45.71	-3.779	4.996	.94986	.196	.524	1426.
310.	.02296	132.19	39.33	1.008	10.363	.96745	.195	.550	1313.
320.	.02469	108.25	33.58	5.903	15.961	.98523	.193	.569	1216.
330.	.02675	91.67	28.58	10.816	21.713	1.00293	.190	.580	1138.
340.	.02914	81.72	24.37	15.630	27.500	1.02020	.187	.575	1079.
350.	.03178	77.18	20.93	20.219	33.167	1.03663	.184	.556	1039.
360.	.03458	76.56	18.20	24.496	38.585	1.05190	.181	.526	1014.
370.	.03744	78.64	16.06	28.431	43.683	1.06587	.179	.494	1002.
380.	.04029	82.31	14.36	32.057	48.468	1.07864	.178	.464	997.
390.	.04308	87.01	13.00	35.410	52.959	1.09031	.177	.437	999.
400.	.04581	92.31	11.88	38.535	57.197	1.10104	.175	.413	1003.
410.	.04846	98.01	10.94	41.469	61.211	1.11095	.174	.392	1011.
420.	.05104	103.87	10.15	44.242	65.036	1.12017	.173	.374	1020.
430.	.05355	109.80	9.48	46.882	68.698	1.12879	.172	.359	1030.
440.	.05599	115.66	8.89	49.405	72.214	1.13688	.171	.346	1041.
450.	.05837	121.49	8.39	51.832	75.611	1.14451	.170	.334	1052.
460.	.06069	127.19	7.94	54.173	78.898	1.15174	.169	.324	1064.
470.	.06296	132.84	7.54	56.441	82.091	1.15861	.168	.315	1076.
480.	.06519	138.46	7.19	58.645	85.202	1.16516	.166	.307	1088.
490.	.06738	143.97	6.86	60.791	88.239	1.17142	.165	.300	1100.
500.	.06952	149.38	6.57	62.886	91.208	1.17743	.164	.294	1113.
510.	.07164	154.74	6.31	64.933	94.118	1.18319	.163	.288	1125.
520.	.07373	160.04	6.07	66.937	96.972	1.18873	.162	.282	1137.
530.	.07577	164.74	5.89	68.904	99.771	1.19407	.161	.279	1152.
540.	.07781	169.98	5.70	70.848	102.546	1.19925	.160	.276	1165.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

2400. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 101.226	.01216	2159.90	320.86	-82.658	-77.452	.50461	.264	.396	3875.
105.	.01225	2103.47	309.75	-81.402	-75.959	.51910	.262	.395	3832.
110.	.01236	2029.31	296.22	-79.476	-73.983	.53747	.260	.395	3777.
115.	.01247	1955.81	283.77	-77.554	-72.012	.55500	.258	.394	3723.
120.	.01258	1882.95	272.20	-75.637	-70.045	.57174	.255	.393	3670.
125.	.01270	1810.77	261.35	-73.725	-68.081	.58778	.252	.392	3617.
130.	.01282	1739.31	251.09	-71.816	-66.120	.60316	.248	.392	3565.
135.	.01294	1668.66	241.34	-69.911	-64.162	.61794	.245	.391	3512.
140.	.01306	1598.88	232.00	-68.010	-62.207	.63216	.242	.391	3459.
145.	.01318	1530.09	223.04	-66.113	-60.254	.64586	.239	.390	3405.
150.	.01331	1462.37	214.40	-64.219	-58.302	.65909	.235	.390	3351.
155.	.01344	1395.84	206.04	-62.327	-56.353	.67188	.232	.390	3296.
160.	.01358	1330.60	197.94	-60.439	-54.404	.68425	.229	.390	3240.
165.	.01372	1266.76	190.07	-58.552	-52.456	.69624	.226	.390	3183.
170.	.01386	1204.43	182.40	-56.668	-50.507	.70787	.223	.390	3125.
175.	.01401	1143.71	174.93	-54.784	-48.558	.71918	.220	.390	3066.
180.	.01416	1084.69	167.65	-52.900	-46.606	.73017	.217	.391	3005.
185.	.01432	1027.47	160.55	-51.015	-44.651	.74088	.215	.391	2943.
190.	.01448	972.12	153.63	-49.128	-42.692	.75134	.213	.392	2879.
195.	.01465	918.70	146.88	-47.238	-40.727	.76155	.212	.394	2813.
200.	.01483	867.24	140.32	-45.343	-38.754	.77154	.211	.395	2746.
205.	.01501	817.77	133.96	-43.441	-36.771	.78133	.210	.398	2678.
210.	.01519	770.26	127.80	-41.531	-34.778	.79094	.209	.400	2610.
215.	.01539	724.65	121.86	-39.612	-32.772	.80038	.209	.402	2542.
220.	.01559	680.85	116.17	-37.685	-30.755	.80966	.208	.404	2476.
225.	.01581	638.68	110.75	-35.752	-28.728	.81877	.206	.406	2415.
230.	.01603	597.92	105.62	-33.821	-26.698	.82768	.200	.405	2364.
235.	.01626	557.14	101.37	-31.895	-24.667	.83641	.201	.413	2305.
240.	.01651	519.94	96.69	-29.930	-22.593	.84515	.200	.418	2243.
245.	.01677	483.21	91.97	-27.949	-20.496	.85380	.199	.422	2180.
250.	.01704	449.38	87.39	-25.954	-18.379	.86235	.198	.426	2119.
255.	.01733	416.36	82.90	-23.941	-16.237	.87083	.196	.430	2057.
260.	.01764	384.20	78.53	-21.918	-14.077	.87922	.195	.435	1994.
265.	.01797	354.78	74.22	-19.875	-11.889	.88756	.194	.440	1931.
270.	.01832	326.67	70.22	-17.818	-9.677	.89583	.193	.446	1871.
275.	.01869	300.24	66.30	-15.739	-7.433	.90407	.192	.452	1811.
280.	.01909	275.50	62.47	-13.641	-5.157	.91227	.191	.459	1751.
285.	.01952	251.39	58.77	-11.511	-2.836	.92049	.190	.467	1690.
290.	.01999	229.24	55.24	-9.331	-.449	.92880	.193	.478	1623.
295.	.02048	208.74	51.82	-7.135	1.969	.93707	.195	.490	1559.
300.	.02103	189.81	48.53	-4.902	4.442	.94538	.196	.501	1500.
310.	.02226	156.92	42.31	-.350	9.541	.96210	.195	.519	1392.
320.	.02371	131.00	36.69	4.279	14.816	.97885	.192	.535	1299.
330.	.02541	111.89	31.71	8.920	20.213	.99546	.190	.544	1220.
340.	.02736	98.96	27.41	13.502	25.662	1.01173	.187	.544	1157.
350.	.02954	91.35	23.79	17.936	31.066	1.02739	.184	.534	1109.
360.	.03189	87.91	20.81	22.149	36.323	1.04220	.181	.516	1076.
370.	.03434	87.69	18.41	26.099	41.359	1.05601	.180	.492	1055.
380.	.03682	89.55	16.47	29.785	46.150	1.06878	.178	.467	1043.
390.	.03931	92.88	14.89	33.226	50.694	1.08059	.177	.443	1038.
400.	.04176	97.11	13.58	36.451	55.011	1.09152	.176	.421	1038.
410.	.04417	101.99	12.49	39.489	59.121	1.10167	.175	.402	1042.
420.	.04654	107.26	11.57	42.364	63.046	1.11113	.174	.384	1048.
430.	.04885	112.76	10.78	45.100	66.808	1.11999	.173	.369	1055.
440.	.05109	118.28	10.09	47.712	70.419	1.12829	.172	.355	1064.
450.	.05330	123.85	9.49	50.221	73.906	1.13613	.171	.343	1073.
460.	.05544	129.40	8.97	52.636	77.275	1.14354	.170	.332	1084.
470.	.05755	134.93	8.50	54.974	80.549	1.15058	.169	.323	1094.
480.	.05961	140.46	8.09	57.242	83.735	1.15729	.167	.315	1106.
490.	.06164	145.92	7.71	59.448	86.843	1.16370	.166	.307	1117.
500.	.06364	151.30	7.38	61.597	89.878	1.16984	.165	.300	1128.
510.	.06560	156.63	7.07	63.695	92.850	1.17572	.164	.294	1140.
520.	.06754	161.93	6.79	65.747	95.763	1.18138	.163	.288	1152.
530.	.06945	167.13	6.53	67.757	98.624	1.18683	.162	.282	1163.
540.	.07135	172.29	6.29	69.728	101.436	1.19209	.160	.277	1175.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

2600. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 101.504	.01216	2171.34	320.94	-82.827	-76.974	.50488	.264	.396	3883.
105.	.01223	2119.34	310.67	-81.481	-75.591	.51828	.263	.395	3843.
110.	.01234	2045.56	297.14	-79.559	-73.617	.53665	.261	.394	3788.
115.	.01245	1972.43	284.69	-77.643	-71.646	.55417	.258	.394	3735.
120.	.01257	1899.95	273.12	-75.731	-69.680	.57090	.255	.393	3682.
125.	.01268	1828.14	262.27	-73.824	-67.718	.58692	.252	.392	3630.
130.	.01280	1757.06	252.02	-71.921	-65.759	.60229	.249	.391	3578.
135.	.01292	1686.78	242.28	-70.022	-63.804	.61705	.246	.391	3526.
140.	.01304	1617.38	232.96	-68.128	-61.851	.63125	.242	.390	3473.
145.	.01316	1548.96	224.01	-66.238	-59.901	.64493	.239	.390	3421.
150.	.01329	1481.61	215.39	-64.351	-57.953	.65814	.236	.389	3367.
155.	.01342	1415.45	207.06	-62.468	-56.007	.67090	.232	.389	3313.
160.	.01355	1350.58	198.98	-60.588	-54.063	.68324	.229	.389	3258.
165.	.01369	1287.11	191.13	-58.710	-52.120	.69520	.226	.389	3201.
170.	.01383	1225.14	183.50	-56.835	-50.176	.70680	.223	.389	3144.
175.	.01398	1164.77	176.07	-54.961	-48.232	.71807	.220	.389	3086.
180.	.01413	1106.11	168.82	-53.088	-46.287	.72903	.218	.389	3026.
185.	.01428	1049.22	161.76	-51.215	-44.339	.73971	.216	.390	2964.
190.	.01444	994.19	154.88	-49.340	-42.387	.75012	.214	.391	2902.
195.	.01461	941.08	148.18	-47.462	-40.430	.76029	.212	.392	2837.
200.	.01478	889.93	141.67	-45.580	-38.466	.77024	.211	.394	2772.
205.	.01495	840.73	135.35	-43.692	-36.493	.77998	.211	.396	2705.
210.	.01514	793.48	129.24	-41.798	-34.510	.78954	.210	.398	2638.
215.	.01533	748.13	123.35	-39.895	-32.516	.79893	.210	.400	2571.
220.	.01552	704.56	117.70	-37.985	-30.512	.80815	.209	.402	2507.
225.	.01573	662.62	112.32	-36.072	-28.499	.81719	.206	.402	2449.
230.	.01594	622.10	107.22	-34.162	-26.486	.82603	.201	.401	2398.
235.	.01617	581.64	102.94	-32.263	-24.478	.83467	.201	.408	2340.
240.	.01641	544.68	98.42	-30.324	-22.424	.84331	.200	.413	2281.
245.	.01666	508.02	93.75	-28.372	-20.352	.85186	.199	.417	2219.
250.	.01692	474.40	89.23	-26.406	-18.261	.86031	.198	.421	2161.
255.	.01720	441.49	84.82	-24.427	-16.148	.86868	.197	.424	2100.
260.	.01749	409.44	80.57	-22.442	-14.023	.87693	.195	.429	2040.
265.	.01780	380.23	76.30	-20.437	-11.869	.88513	.194	.432	1980.
270.	.01812	352.29	72.33	-18.425	-9.700	.89325	.193	.437	1921.
275.	.01847	325.96	68.49	-16.394	-7.501	.90132	.192	.442	1864.
280.	.01884	301.36	64.76	-14.348	-5.278	.90933	.191	.447	1807.
285.	.01924	277.08	61.11	-12.279	-3.017	.91733	.190	.454	1749.
290.	.01966	254.79	57.65	-10.165	-.700	.92541	.193	.464	1685.
295.	.02011	234.19	54.32	-8.042	1.641	.93341	.195	.473	1623.
300.	.02060	215.03	51.11	-5.889	4.028	.94143	.196	.482	1566.
310.	.02168	181.24	45.03	-1.518	8.922	.95748	.195	.497	1464.
320.	.02294	153.77	39.51	2.906	13.952	.97345	.192	.509	1373.
330.	.02439	132.69	34.55	7.335	19.079	.98923	.189	.516	1295.
340.	.02604	117.39	30.21	11.720	24.257	1.00469	.186	.518	1230.
350.	.02788	107.22	26.47	16.000	29.422	1.01966	.184	.513	1178.
360.	.02987	101.27	23.33	20.117	34.499	1.03396	.181	.501	1139.
370.	.03198	98.82	20.72	24.033	39.428	1.04747	.180	.484	1111.
380.	.03415	98.83	18.57	27.731	44.171	1.06012	.178	.464	1092.
390.	.03635	100.65	16.80	31.217	48.716	1.07193	.177	.445	1082.
400.	.03855	103.65	15.32	34.505	53.064	1.08294	.176	.426	1077.
410.	.04073	107.53	14.08	37.618	57.229	1.09323	.175	.408	1076.
420.	.04289	112.01	13.02	40.572	61.222	1.10285	.175	.391	1078.
430.	.04501	116.91	12.11	43.388	65.059	1.11188	.174	.376	1083.
440.	.04709	122.00	11.33	46.076	68.746	1.12036	.173	.363	1089.
450.	.04912	127.22	10.64	48.658	72.308	1.12837	.172	.351	1097.
460.	.05111	132.53	10.03	51.143	75.750	1.13593	.171	.340	1106.
470.	.05307	137.87	9.50	53.545	79.094	1.14313	.170	.330	1115.
480.	.05499	143.25	9.02	55.874	82.348	1.14998	.168	.321	1125.
490.	.05688	148.60	8.59	58.135	85.519	1.15652	.167	.313	1135.
500.	.05874	153.89	8.20	60.336	88.614	1.16278	.166	.306	1146.
510.	.06057	159.16	7.85	62.483	91.643	1.16878	.165	.299	1157.
520.	.06237	164.41	7.53	64.581	94.611	1.17454	.164	.293	1168.
530.	.06416	169.55	7.24	66.634	97.523	1.18009	.162	.287	1179.
540.	.06592	174.66	6.97	68.645	100.384	1.18544	.161	.282	1190.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

2800. PSIA ISOBAR

TEMPERATURE DEG. F	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 101.781	.01215	2182.75	321.02	-82.795	-76.496	.50516	.265	.396	3890.
105.	.01222	2135.12	311.59	-81.559	-75.223	.51747	.263	.395	3854.
110.	.01233	2061.71	298.05	-79.642	-73.250	.53583	.261	.394	3799.
115.	.01244	1988.96	285.60	-77.730	-71.280	.55334	.258	.393	3747.
120.	.01255	1916.84	274.04	-75.823	-69.316	.57006	.255	.393	3694.
125.	.01266	1845.40	263.19	-73.921	-67.355	.58607	.252	.392	3643.
130.	.01278	1774.69	252.95	-72.024	-65.398	.60142	.249	.391	3591.
135.	.01290	1704.78	243.21	-70.132	-63.445	.61616	.246	.390	3540.
140.	.01302	1635.74	233.90	-68.244	-61.495	.63034	.243	.390	3488.
145.	.01314	1567.68	224.97	-66.360	-59.548	.64401	.239	.389	3436.
150.	.01326	1500.70	216.37	-64.481	-57.603	.65719	.236	.389	3383.
155.	.01339	1434.90	208.05	-62.605	-55.661	.66993	.233	.388	3329.
160.	.01352	1370.39	200.00	-60.733	-53.721	.68225	.230	.388	3275.
165.	.01366	1307.27	192.18	-58.865	-51.782	.69418	.227	.388	3219.
170.	.01380	1245.65	184.58	-56.998	-49.844	.70575	.224	.388	3163.
175.	.01394	1185.62	177.18	-55.134	-47.905	.71699	.221	.388	3105.
180.	.01409	1127.28	169.97	-53.271	-45.966	.72792	.218	.388	3046.
185.	.01424	1070.72	162.95	-51.409	-44.025	.73856	.216	.389	2986.
190.	.01440	1016.00	156.11	-49.545	-42.080	.74893	.214	.389	2924.
195.	.01456	963.18	149.45	-47.680	-40.130	.75906	.213	.390	2860.
200.	.01473	912.30	142.98	-45.810	-38.174	.76897	.212	.392	2796.
205.	.01490	863.37	136.71	-43.936	-36.211	.77867	.211	.394	2730.
210.	.01508	816.37	130.64	-42.056	-34.237	.78818	.211	.396	2665.
215.	.01526	771.24	124.79	-40.169	-32.254	.79751	.210	.398	2599.
220.	.01546	727.89	119.18	-38.275	-30.261	.80668	.209	.399	2536.
225.	.01566	686.17	113.83	-36.379	-28.262	.81566	.207	.400	2479.
230.	.01586	645.87	108.75	-34.489	-26.264	.82443	.202	.398	2430.
235.	.01608	605.73	104.51	-32.615	-24.276	.83298	.201	.404	2374.
240.	.01631	568.97	100.01	-30.700	-22.242	.84155	.201	.409	2316.
245.	.01655	532.37	95.48	-28.774	-20.192	.85000	.200	.413	2257.
250.	.01680	498.92	90.99	-26.835	-18.124	.85836	.199	.415	2199.
255.	.01707	466.09	86.64	-24.886	-16.037	.86662	.197	.419	2141.
260.	.01734	434.16	82.45	-22.933	-13.941	.87476	.196	.423	2083.
265.	.01764	405.11	78.35	-20.964	-11.820	.88285	.195	.426	2027.
270.	.01794	377.31	74.32	-18.989	-9.685	.89083	.194	.429	1969.
275.	.01827	351.05	70.55	-17.000	-7.527	.89875	.193	.434	1914.
280.	.01862	326.52	66.88	-14.999	-5.347	.90661	.192	.438	1859.
285.	.01898	302.11	63.32	-12.981	-3.138	.91442	.191	.443	1803.
290.	.01937	279.66	59.92	-10.923	-.877	.92230	.193	.452	1742.
295.	.01979	258.98	56.65	-8.859	1.401	.93009	.195	.460	1682.
300.	.02023	239.63	53.49	-6.771	3.719	.93788	.196	.467	1628.
310.	.02121	205.13	47.51	-2.545	8.451	.95340	.195	.479	1529.
320.	.02232	176.42	42.07	1.716	13.289	.96876	.192	.488	1442.
330.	.02359	153.73	37.17	5.975	18.205	.98389	.189	.494	1365.
340.	.02501	136.51	32.80	10.195	23.164	.99869	.186	.497	1299.
350.	.02659	124.20	29.00	14.335	28.124	1.01307	.183	.494	1245.
360.	.02831	116.08	25.74	18.349	33.028	1.02689	.181	.486	1201.
370.	.03014	111.57	22.96	22.208	37.834	1.04006	.180	.474	1168.
380.	.03204	109.77	20.64	25.886	42.501	1.05251	.178	.459	1144.
390.	.03400	110.03	18.69	29.384	47.011	1.06422	.177	.442	1128.
400.	.03597	111.74	17.06	32.706	51.355	1.07522	.177	.426	1118.
410.	.03795	114.49	15.68	35.866	55.541	1.08556	.176	.411	1113.
420.	.03991	118.07	14.50	38.878	59.572	1.09527	.175	.396	1112.
430.	.04186	122.24	13.47	41.756	63.459	1.10442	.174	.382	1113.
440.	.04377	126.79	12.59	44.509	67.203	1.11303	.173	.369	1117.
450.	.04565	131.57	11.81	47.153	70.824	1.12117	.173	.357	1122.
460.	.04750	136.57	11.13	49.699	74.327	1.12887	.172	.346	1129.
470.	.04932	141.66	10.52	52.159	77.731	1.13619	.170	.336	1137.
480.	.05111	146.81	9.98	54.543	81.044	1.14317	.169	.327	1146.
490.	.05287	151.99	9.49	56.857	84.272	1.14983	.168	.319	1155.
500.	.05461	157.16	9.05	59.107	87.421	1.15619	.167	.311	1164.
510.	.05632	162.32	8.66	61.300	90.502	1.16230	.166	.304	1174.
520.	.05801	167.48	8.29	63.441	93.519	1.16816	.165	.298	1185.
530.	.05968	172.53	7.96	65.534	96.477	1.17379	.163	.292	1195.
540.	.06133	177.56	7.66	67.583	99.383	1.17922	.162	.286	1206.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

3000. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 102.058	.01214	2194.14	321.10	-82.764	-76.019	.50543	.265	.396	3897.
105.	.01221	2150.83	312.51	-81.636	-74.855	.51667	.264	.395	3865.
110.	.01231	2077.79	298.96	-79.723	-72.882	.53502	.261	.394	3811.
115.	.01242	2005.40	286.51	-77.816	-70.914	.55252	.259	.393	3758.
120.	.01253	1933.64	274.94	-75.914	-68.951	.56923	.256	.392	3707.
125.	.01265	1862.56	264.10	-74.017	-66.992	.58523	.253	.391	3656.
130.	.01276	1792.21	253.86	-72.126	-65.037	.60056	.250	.391	3605.
135.	.01288	1722.65	244.13	-70.239	-63.086	.61529	.246	.390	3553.
140.	.01300	1653.97	234.84	-68.358	-61.138	.62945	.243	.389	3502.
145.	.01312	1586.27	225.92	-66.481	-59.194	.64310	.240	.388	3450.
150.	.01324	1519.64	217.33	-64.609	-57.253	.65626	.237	.388	3398.
155.	.01337	1454.19	209.04	-62.740	-55.314	.66897	.233	.387	3345.
160.	.01350	1390.02	201.01	-60.876	-53.378	.68126	.230	.387	3291.
165.	.01363	1327.24	193.21	-59.016	-51.443	.69317	.227	.387	3236.
170.	.01377	1265.95	185.64	-57.158	-49.510	.70471	.224	.387	3181.
175.	.01391	1206.25	178.27	-55.304	-47.576	.71592	.221	.387	3124.
180.	.01406	1148.23	171.10	-53.451	-45.643	.72682	.219	.387	3066.
185.	.01420	1091.97	164.11	-51.598	-43.707	.73742	.217	.387	3006.
190.	.01436	1037.54	157.31	-49.746	-41.769	.74776	.215	.388	2945.
195.	.01452	985.00	150.69	-47.892	-39.827	.75785	.214	.389	2883.
200.	.01468	934.38	144.26	-46.034	-37.879	.76772	.213	.390	2820.
205.	.01485	885.70	138.03	-44.173	-35.924	.77738	.212	.392	2755.
210.	.01502	838.93	132.00	-42.306	-33.960	.78685	.211	.394	2691.
215.	.01521	794.01	126.19	-40.433	-31.986	.79613	.211	.395	2627.
220.	.01539	750.87	120.61	-38.555	-30.004	.80525	.210	.397	2565.
225.	.01559	709.34	115.29	-36.676	-28.017	.81417	.207	.397	2508.
230.	.01579	669.24	110.24	-34.803	-26.033	.82289	.202	.395	2461.
235.	.01600	629.44	106.04	-32.952	-24.063	.83136	.202	.401	2406.
240.	.01622	592.84	101.54	-31.059	-22.048	.83985	.201	.405	2349.
245.	.01645	556.30	97.14	-29.157	-20.018	.84822	.200	.409	2292.
250.	.01669	522.99	92.67	-27.243	-17.970	.85649	.199	.411	2236.
255.	.01695	490.23	88.37	-25.321	-15.907	.86466	.198	.414	2180.
260.	.01721	458.41	84.24	-23.398	-13.838	.87270	.196	.417	2124.
265.	.01749	429.47	80.24	-21.460	-11.745	.88067	.195	.420	2070.
270.	.01778	401.78	76.27	-19.518	-9.640	.88854	.194	.423	2015.
275.	.01809	375.56	72.51	-17.565	-7.516	.89634	.193	.426	1961.
280.	.01841	351.05	68.89	-15.603	-5.373	.90406	.192	.430	1908.
285.	.01876	326.54	65.39	-13.629	-3.209	.91172	.191	.434	1854.
290.	.01912	303.94	62.03	-11.618	-.996	.91944	.193	.442	1794.
295.	.01950	283.18	58.82	-9.605	1.230	.92705	.195	.449	1737.
300.	.01991	263.67	55.71	-7.570	3.491	.93465	.196	.455	1685.
310.	.02080	228.60	49.82	-3.463	8.092	.94973	.195	.464	1589.
320.	.02180	198.86	44.44	.664	12.776	.96460	.192	.472	1505.
330.	.02293	174.85	39.59	4.784	17.521	.97921	.189	.477	1430.
340.	.02418	156.03	35.23	8.867	22.302	.99348	.186	.479	1364.
350.	.02557	141.92	31.37	12.884	27.088	1.00735	.183	.477	1308.
360.	.02707	131.93	28.01	16.798	31.837	1.02073	.181	.472	1261.
370.	.02868	125.54	25.12	20.588	36.520	1.03356	.180	.463	1224.
380.	.03036	122.03	22.65	24.231	41.097	1.04577	.178	.451	1196.
390.	.03210	120.75	20.56	27.719	45.553	1.05735	.177	.438	1175.
400.	.03387	121.15	18.79	31.052	49.869	1.06828	.177	.425	1161.
410.	.03566	122.75	17.28	34.238	54.049	1.07860	.176	.411	1152.
420.	.03745	125.34	15.98	37.287	58.093	1.08834	.176	.398	1147.
430.	.03924	128.69	14.86	40.211	62.009	1.09756	.175	.385	1146.
440.	.04100	132.62	13.87	43.014	65.791	1.10626	.174	.373	1147.
450.	.04274	136.89	13.01	45.711	69.456	1.11449	.173	.361	1150.
460.	.04446	141.51	12.25	48.310	73.008	1.12230	.172	.351	1155.
470.	.04615	146.27	11.57	50.822	76.462	1.12973	.171	.341	1161.
480.	.04783	151.13	10.96	53.256	79.825	1.13682	.170	.332	1168.
490.	.04948	156.09	10.41	55.617	83.103	1.14358	.169	.323	1176.
500.	.05110	161.09	9.92	57.913	86.300	1.15004	.168	.316	1185.
510.	.05270	166.10	9.48	60.149	89.427	1.15623	.167	.309	1193.
520.	.05429	171.13	9.07	62.331	92.490	1.16218	.166	.302	1203.
530.	.05585	176.06	8.70	64.462	95.490	1.16789	.164	.296	1212.
540.	.05740	180.98	8.37	66.547	98.435	1.17340	.163	.290	1222.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

3200. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 102.334	.01213	2205.50	321.19	-82.732	-75.541	.50570	.265	.396	3905.
105.	.01219	2166.47	313.42	-81.712	-74.488	.51587	.264	.395	3875.
110.	.01230	2093.78	299.87	-79.803	-72.515	.53422	.262	.394	3822.
115.	.01241	2021.74	287.41	-77.931	-70.548	.55171	.259	.393	3770.
120.	.01252	1950.35	275.85	-76.004	-68.586	.56841	.256	.392	3719.
125.	.01263	1879.62	265.01	-74.112	-66.628	.58439	.253	.391	3668.
130.	.01274	1809.62	254.77	-72.226	-64.675	.59971	.250	.390	3618.
135.	.01286	1740.41	245.05	-70.345	-62.726	.61442	.247	.389	3567.
140.	.01298	1672.08	235.76	-68.470	-60.781	.62857	.243	.389	3516.
145.	.01310	1604.72	226.86	-66.599	-58.839	.64219	.240	.388	3465.
150.	.01322	1538.44	218.29	-64.734	-56.901	.65533	.237	.387	3413.
155.	.01334	1473.32	210.01	-62.873	-54.966	.66802	.234	.387	3361.
160.	.01347	1409.49	202.00	-61.017	-53.033	.68029	.231	.386	3308.
165.	.01360	1347.04	194.23	-59.164	-51.103	.69217	.227	.386	3254.
170.	.01374	1286.07	186.68	-57.315	-49.174	.70369	.225	.386	3198.
175.	.01388	1226.68	179.34	-55.469	-47.246	.71487	.222	.386	3142.
180.	.01402	1168.96	172.20	-53.626	-45.317	.72573	.219	.386	3085.
185.	.01417	1112.99	165.25	-51.783	-43.388	.73631	.217	.386	3026.
190.	.01432	1058.84	158.48	-49.941	-41.456	.74661	.216	.387	2966.
195.	.01447	1006.56	151.90	-48.098	-39.521	.75667	.214	.388	2905.
200.	.01464	956.19	145.51	-46.252	-37.580	.76650	.213	.389	2843.
205.	.01480	907.74	139.31	-44.403	-35.633	.77612	.212	.390	2779.
210.	.01497	861.18	133.32	-42.549	-33.677	.78555	.212	.392	2716.
215.	.01515	816.46	127.55	-40.689	-31.713	.79479	.211	.393	2653.
220.	.01533	773.51	122.00	-38.826	-29.742	.80386	.210	.395	2592.
225.	.01552	732.17	116.70	-36.961	-27.766	.81273	.208	.395	2537.
230.	.01571	692.25	111.68	-35.106	-25.794	.82139	.203	.392	2491.
235.	.01592	652.79	107.51	-33.275	-23.841	.82979	.202	.398	2438.
240.	.01613	616.32	103.01	-31.403	-21.842	.83821	.202	.401	2382.
245.	.01636	579.85	98.71	-29.523	-19.832	.84650	.201	.405	2327.
250.	.01659	546.64	94.32	-27.631	-17.802	.85470	.200	.407	2272.
255.	.01683	513.95	90.05	-25.734	-15.760	.86279	.198	.409	2217.
260.	.01708	482.24	85.95	-23.839	-13.716	.87073	.197	.412	2163.
265.	.01735	453.38	81.99	-21.928	-11.647	.87861	.195	.414	2111.
270.	.01763	425.78	78.16	-20.016	-9.570	.88638	.194	.417	2058.
275.	.01792	399.57	74.38	-18.095	-7.475	.89406	.193	.420	2005.
280.	.01823	375.01	70.80	-16.166	-5.364	.90167	.192	.423	1954.
285.	.01855	350.44	67.33	-14.231	-3.238	.90920	.191	.426	1902.
290.	.01889	327.69	64.01	-12.261	-1.066	.91677	.193	.433	1844.
295.	.01925	306.85	60.86	-10.291	1.116	.92423	.195	.440	1788.
300.	.01963	287.20	57.80	-8.302	3.328	.93166	.196	.445	1738.
310.	.02045	251.65	51.99	-4.295	7.820	.94639	.195	.453	1645.
320.	.02136	221.06	46.66	-.279	12.377	.96086	.192	.458	1563.
330.	.02237	195.94	41.84	3.724	16.982	.97503	.189	.462	1490.
340.	.02350	175.75	37.49	7.692	21.616	.98887	.186	.464	1425.
350.	.02473	160.10	33.61	11.600	26.255	1.00231	.183	.463	1369.
360.	.02606	148.50	30.19	15.422	30.867	1.01531	.181	.459	1320.
370.	.02749	140.43	27.20	19.143	35.433	1.02782	.180	.453	1280.
380.	.02899	135.33	24.62	22.740	39.919	1.03978	.178	.443	1248.
390.	.03055	132.56	22.40	26.206	44.309	1.05119	.178	.433	1223.
400.	.03215	131.68	20.50	29.534	48.584	1.06201	.177	.421	1205.
410.	.03377	132.14	18.88	32.730	52.740	1.07227	.176	.410	1193.
420.	.03540	133.72	17.47	35.801	56.779	1.08201	.176	.398	1185.
430.	.03704	136.18	16.24	38.756	60.704	1.09124	.175	.387	1180.
440.	.03867	139.43	15.16	41.597	64.509	1.09999	.175	.376	1179.
450.	.04028	143.15	14.22	44.335	68.205	1.10830	.174	.365	1180.
460.	.04188	147.30	13.38	46.978	71.794	1.11619	.173	.355	1182.
470.	.04346	151.67	12.63	49.535	75.288	1.12371	.172	.345	1187.
480.	.04502	156.20	11.96	52.013	78.692	1.13087	.171	.336	1192.
490.	.04657	160.89	11.35	54.418	82.012	1.13772	.170	.328	1199.
500.	.04809	165.68	10.81	56.755	85.252	1.14427	.169	.320	1206.
510.	.04960	170.49	10.32	59.031	88.420	1.15054	.168	.313	1214.
520.	.05109	175.35	9.87	61.251	91.523	1.15657	.166	.306	1222.
530.	.05256	180.13	9.46	63.418	94.560	1.16236	.165	.300	1231.
540.	.05401	184.92	9.08	65.537	97.542	1.16793	.164	.294	1240.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

3400. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM OERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUNO FT/S
* 102.609	.01213	2216.85	321.27	-82.699	-75.064	.50597	.265	.396	3912.
105.	.01218	2182.02	314.32	-81.787	-74.120	.51507	.264	.395	3886.
110.	.01228	2109.69	300.77	-79.882	-72.148	.53342	.262	.394	3833.
115.	.01239	2038.01	288.31	-77.984	-70.182	.55090	.259	.393	3781.
120.	.01250	1966.96	276.74	-76.092	-68.221	.56759	.256	.392	3731.
125.	.01261	1896.58	265.90	-74.206	-66.265	.58356	.253	.391	3680.
130.	.01273	1826.92	255.67	-72.325	-64.313	.59887	.250	.390	3630.
135.	.01284	1758.05	245.96	-70.450	-62.366	.61356	.247	.389	3580.
140.	.01296	1690.06	236.68	-68.580	-60.423	.62769	.244	.388	3530.
145.	.01307	1623.04	227.79	-66.716	-58.484	.64130	.241	.387	3479.
150.	.01320	1557.09	219.23	-64.857	-56.549	.65442	.237	.387	3428.
155.	.01332	1492.30	210.97	-63.003	-54.617	.66709	.234	.386	3376.
160.	.01345	1428.79	202.98	-61.154	-52.688	.67934	.231	.385	3324.
165.	.01358	1366.66	195.23	-59.309	-50.762	.69119	.228	.385	3270.
170.	.01371	1306.00	187.71	-57.469	-48.837	.70268	.225	.385	3216.
175.	.01385	1246.91	180.40	-55.631	-46.913	.71383	.222	.385	3161.
180.	.01399	1189.48	173.28	-53.797	-44.990	.72467	.220	.385	3104.
185.	.01413	1133.79	166.36	-51.964	-43.066	.73521	.218	.385	3046.
190.	.01428	1079.90	159.63	-50.132	-41.141	.74549	.216	.385	2987.
195.	.01443	1027.88	153.08	-48.299	-39.212	.75551	.215	.386	2927.
200.	.01459	977.74	146.73	-46.464	-37.278	.76531	.214	.387	2865.
205.	.01475	929.50	140.56	-44.626	-35.338	.77489	.213	.389	2803.
210.	.01492	883.14	134.61	-42.784	-33.391	.78428	.213	.390	2740.
215.	.01509	838.61	128.86	-40.938	-31.435	.79348	.212	.392	2679.
220.	.01527	795.83	123.35	-39.087	-29.473	.80250	.211	.393	2619.
225.	.01545	754.66	118.08	-37.238	-27.508	.81133	.209	.392	2565.
230.	.01564	714.91	113.07	-35.398	-25.548	.81994	.203	.390	2520.
235.	.01584	675.79	108.95	-33.587	-23.611	.82827	.203	.395	2468.
240.	.01605	639.44	104.47	-31.733	-21.627	.83662	.202	.398	2414.
245.	.01627	603.04	100.21	-29.874	-19.633	.84484	.201	.401	2359.
250.	.01649	569.92	95.91	-28.003	-17.621	.85297	.200	.403	2307.
255.	.01672	537.28	91.65	-26.128	-15.598	.86098	.199	.405	2253.
260.	.01697	505.68	87.58	-24.257	-13.575	.86884	.197	.408	2200.
265.	.01722	476.87	83.66	-22.372	-11.529	.87664	.196	.410	2149.
270.	.01749	449.34	79.92	-20.487	-9.477	.88431	.195	.412	2099.
275.	.01777	423.13	76.21	-18.594	-7.408	.89190	.194	.414	2048.
280.	.01806	398.45	72.65	-16.695	-5.326	.89941	.193	.417	1998.
285.	.01836	373.87	69.22	-14.794	-3.232	.90682	.192	.420	1947.
290.	.01868	350.97	65.92	-12.859	-1.096	.91426	.194	.426	1890.
295.	.01902	330.05	62.78	-10.927	1.048	.92159	.196	.432	1837.
300.	.01937	310.26	59.79	-8.978	3.218	.92889	.196	.437	1788.
310.	.02013	274.30	54.04	-5.057	7.619	.94332	.195	.443	1698.
320.	.02097	243.01	48.75	-1.135	12.069	.95745	.192	.447	1618.
330.	.02190	216.93	43.96	2.769	16.557	.97126	.189	.450	1547.
340.	.02292	195.57	39.62	6.638	21.067	.98472	.186	.451	1483.
350.	.02403	176.58	35.72	10.452	25.580	.99781	.183	.451	1426.
360.	.02523	165.56	32.25	14.191	30.073	1.01046	.181	.448	1376.
370.	.02651	156.00	29.19	17.844	34.532	1.02268	.180	.443	1334.
380.	.02786	149.44	26.52	21.392	38.930	1.03441	.179	.435	1299.
390.	.02926	145.25	24.20	24.826	43.250	1.04563	.178	.427	1272.
400.	.03071	143.14	22.19	28.140	47.475	1.05633	.177	.417	1250.
410.	.03219	142.50	20.45	31.334	51.597	1.06651	.176	.407	1234.
420.	.03368	143.09	18.94	34.415	55.618	1.07620	.176	.397	1223.
430.	.03518	144.66	17.63	37.388	59.539	1.08543	.176	.387	1216.
440.	.03669	147.17	16.46	40.257	63.354	1.09420	.175	.377	1212.
450.	.03818	150.27	15.44	43.027	67.068	1.10254	.174	.367	1211.
460.	.03967	153.90	14.52	45.707	70.684	1.11049	.174	.357	1211.
470.	.04115	157.84	13.71	48.302	74.208	1.11807	.173	.348	1214.
480.	.04261	161.98	12.97	50.818	77.645	1.12531	.172	.339	1218.
490.	.04406	166.35	12.31	53.261	81.000	1.13223	.171	.331	1223.
500.	.04549	170.88	11.71	55.636	84.276	1.13885	.170	.323	1228.
510.	.04691	175.47	11.17	57.948	87.480	1.14520	.168	.316	1235.
520.	.04831	180.12	10.68	60.203	90.618	1.15129	.167	.309	1243.
530.	.04969	184.74	10.23	62.403	93.689	1.15714	.166	.303	1250.
540.	.05106	189.37	9.81	64.554	96.703	1.16278	.165	.297	1259.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

3600. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 102.884	.01212	2228.17	321.36	-82.667	-74.588	.50624	.266	.395	3919.
105.	.01218	2197.51	315.22	-81.861	-73.752	.51429	.265	.395	3897.
110.	.01227	2125.52	301.66	-79.960	-71.781	.53262	.262	.394	3844.
115.	.01236	2054.16	289.20	-78.067	-69.815	.55010	.260	.393	3793.
120.	.01249	1983.48	277.63	-76.179	-67.855	.56678	.257	.391	3743.
125.	.01260	1913.44	266.79	-74.298	-65.901	.58274	.254	.390	3693.
130.	.01271	1844.12	256.57	-72.422	-63.951	.59803	.251	.389	3643.
135.	.01282	1775.58	246.86	-70.552	-62.006	.61271	.247	.389	3594.
140.	.01294	1707.92	237.59	-68.689	-60.065	.62683	.244	.388	3544.
145.	.01305	1641.23	228.71	-66.831	-58.129	.64042	.241	.387	3493.
150.	.01317	1575.60	220.16	-64.978	-56.196	.65352	.238	.386	3443.
155.	.01330	1511.14	211.92	-63.131	-54.267	.66617	.235	.385	3392.
160.	.01342	1447.94	203.94	-61.289	-52.342	.67839	.231	.385	3340.
165.	.01355	1386.11	196.22	-59.452	-50.419	.69022	.228	.384	3287.
170.	.01368	1325.75	188.72	-57.619	-48.499	.70169	.226	.384	3233.
175.	.01382	1266.95	181.43	-55.790	-46.580	.71282	.223	.384	3178.
180.	.01396	1209.80	174.35	-53.964	-44.661	.72362	.221	.384	3123.
185.	.01410	1154.37	167.45	-52.141	-42.743	.73414	.218	.384	3066.
190.	.01424	1100.74	160.75	-50.318	-40.823	.74438	.217	.384	3007.
195.	.01439	1048.95	154.24	-48.495	-38.900	.75437	.215	.385	2948.
200.	.01455	999.03	147.91	-46.671	-36.973	.76413	.214	.386	2887.
205.	.01471	950.99	141.78	-44.844	-35.040	.77368	.214	.387	2826.
210.	.01487	904.82	135.86	-43.013	-33.100	.78303	.213	.389	2764.
215.	.01504	860.47	130.15	-41.178	-31.153	.79220	.213	.390	2703.
220.	.01521	817.85	124.66	-39.341	-29.200	.80118	.212	.391	2645.
225.	.01539	776.83	119.41	-37.505	-27.244	.80996	.209	.390	2591.
230.	.01558	737.25	114.42	-35.679	-25.295	.81852	.204	.387	2548.
235.	.01577	698.47	110.36	-33.886	-23.372	.82679	.203	.392	2498.
240.	.01597	662.22	105.87	-32.050	-21.402	.83509	.203	.395	2444.
245.	.01618	625.91	101.66	-30.211	-19.425	.84324	.202	.398	2391.
250.	.01640	592.84	97.44	-28.359	-17.428	.85131	.201	.400	2340.
255.	.01662	560.25	93.22	-26.505	-15.423	.85925	.199	.402	2287.
260.	.01686	528.76	89.19	-24.656	-13.419	.86703	.198	.404	2236.
265.	.01710	499.98	85.27	-22.793	-11.393	.87475	.196	.405	2186.
270.	.01736	472.49	81.56	-20.932	-9.362	.88234	.195	.407	2137.
275.	.01762	446.27	77.95	-19.066	-7.318	.88985	.194	.409	2089.
280.	.01790	421.43	74.41	-17.194	-5.261	.89726	.193	.411	2040.
285.	.01819	396.86	71.01	-15.323	-3.197	.90457	.192	.414	1991.
290.	.01849	373.83	67.74	-13.420	-1.092	.91190	.194	.420	1935.
295.	.01881	352.82	64.60	-11.520	1.019	.91912	.196	.425	1882.
300.	.01914	332.90	61.64	-9.607	3.154	.92630	.197	.429	1834.
310.	.01985	296.57	55.99	-5.760	7.474	.94047	.195	.435	1748.
320.	.02063	264.70	50.74	-1.919	11.835	.95431	.193	.438	1670.
330.	.02149	237.78	45.95	1.901	16.223	.96781	.189	.440	1600.
340.	.02242	215.41	41.63	5.683	20.627	.98096	.186	.441	1537.
350.	.02343	197.24	37.71	9.414	25.033	.99373	.183	.440	1480.
360.	.02452	182.97	34.21	13.078	29.420	1.00609	.181	.438	1430.
370.	.02568	172.06	31.09	16.668	33.784	1.01805	.180	.434	1386.
380.	.02690	164.18	28.35	20.166	38.098	1.02955	.179	.428	1350.
390.	.02818	158.66	25.95	23.564	42.347	1.04059	.178	.421	1320.
400.	.02950	155.38	23.84	26.857	46.520	1.05116	.177	.413	1295.
410.	.03084	153.70	22.01	30.042	50.603	1.06124	.177	.404	1277.
420.	.03221	153.33	20.41	33.124	54.598	1.07087	.176	.395	1262.
430.	.03360	154.01	19.00	36.107	58.504	1.08006	.176	.387	1252.
440.	.03499	155.76	17.76	38.993	62.318	1.08883	.175	.377	1246.
450.	.03638	158.22	16.66	41.788	66.040	1.09719	.175	.368	1243.
460.	.03777	161.27	15.67	44.495	69.673	1.10518	.174	.359	1242.
470.	.03915	164.73	14.79	47.121	73.219	1.11281	.173	.350	1242.
480.	.04052	168.45	13.99	49.670	76.681	1.12010	.172	.342	1244.
490.	.04188	172.46	13.27	52.146	80.064	1.12707	.171	.334	1248.
500.	.04323	176.70	12.62	54.555	83.370	1.13375	.170	.326	1252.
510.	.04456	181.02	12.04	56.900	86.605	1.14016	.169	.319	1258.
520.	.04588	185.44	11.50	59.188	89.774	1.14631	.168	.312	1264.
530.	.04719	189.86	11.01	61.418	92.875	1.15222	.167	.306	1271.
540.	.04848	194.31	10.56	63.599	95.918	1.15791	.165	.300	1278.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

3800. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE $(FT^3-PSIA/LB$	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 103.159	.01211	2239.47	321.45	-82.634	-74.111	.50651	.266	.395	3927.
105.	.01215	2212.92	316.12	-81.934	-73.384	.51350	.265	.395	3907.
110.	.01226	2141.28	302.55	-80.038	-71.413	.53184	.263	.393	3855.
115.	.01236	2070.28	290.09	-78.148	-69.449	.54930	.260	.392	3804.
120.	.01247	1999.91	278.51	-76.265	-67.490	.56597	.257	.391	3754.
125.	.01258	1930.20	267.68	-74.388	-65.536	.58192	.254	.390	3705.
130.	.01269	1861.21	257.45	-72.518	-63.588	.59720	.251	.389	3656.
135.	.01280	1793.01	247.75	-70.654	-61.645	.61187	.248	.388	3607.
140.	.01292	1725.67	238.49	-68.795	-59.706	.62597	.245	.387	3557.
145.	.01303	1659.30	229.61	-66.943	-57.772	.63954	.241	.386	3508.
150.	.01315	1593.98	221.08	-65.097	-55.843	.65262	.238	.385	3457.
155.	.01327	1529.83	212.85	-63.257	-53.917	.66525	.235	.385	3407.
160.	.01340	1466.93	204.90	-61.422	-51.995	.67746	.232	.384	3355.
165.	.01352	1405.40	197.19	-59.592	-50.076	.68927	.229	.383	3303.
170.	.01365	1345.33	189.71	-57.767	-48.159	.70071	.226	.383	3250.
175.	.01379	1286.81	182.45	-55.946	-46.244	.71181	.223	.383	3196.
180.	.01392	1229.92	175.39	-54.128	-44.331	.72259	.221	.383	3141.
185.	.01406	1174.75	168.52	-52.313	-42.417	.73308	.219	.383	3084.
190.	.01421	1121.36	161.85	-50.500	-40.503	.74329	.217	.383	3027.
195.	.01435	1069.79	155.37	-48.686	-38.586	.75325	.216	.384	2968.
200.	.01451	1020.08	149.07	-46.872	-36.665	.76298	.215	.385	2909.
205.	.01466	972.24	142.98	-45.056	-34.738	.77250	.214	.386	2848.
210.	.01482	926.24	137.08	-43.236	-32.806	.78182	.214	.387	2787.
215.	.01499	882.05	131.39	-41.412	-30.866	.79094	.213	.388	2727.
220.	.01516	839.59	125.93	-39.587	-28.921	.79989	.212	.389	2670.
225.	.01533	798.72	120.70	-37.763	-26.975	.80863	.210	.389	2617.
230.	.01551	759.28	115.73	-35.952	-25.036	.81715	.204	.385	2575.
235.	.01570	720.85	111.72	-34.176	-23.127	.82535	.204	.390	2526.
240.	.01590	684.68	107.23	-32.355	-21.169	.83360	.203	.392	2473.
245.	.01610	648.47	103.06	-30.535	-19.207	.84169	.202	.395	2422.
250.	.01631	615.44	98.92	-28.701	-17.225	.84970	.201	.397	2372.
255.	.01653	582.90	94.75	-26.865	-15.236	.85758	.200	.398	2321.
260.	.01675	551.52	90.73	-25.037	-13.250	.86529	.198	.400	2270.
265.	.01699	522.75	86.81	-23.195	-11.241	.87294	.197	.401	2221.
270.	.01723	495.29	83.13	-21.357	-9.231	.88046	.196	.403	2174.
275.	.01749	469.03	79.59	-19.514	-7.208	.88788	.194	.405	2127.
280.	.01775	443.98	76.11	-17.667	-5.174	.89521	.193	.407	2080.
285.	.01803	419.46	72.77	-15.823	-3.136	.90243	.192	.409	2032.
290.	.01832	396.32	69.51	-13.948	-1.059	.90967	.194	.414	1977.
295.	.01862	375.21	66.37	-12.077	1.024	.91679	.196	.419	1925.
300.	.01893	355.15	63.39	-10.194	3.127	.92386	.197	.422	1878.
310.	.01960	318.49	57.85	-6.413	7.378	.93780	.196	.427	1795.
320.	.02033	286.13	52.62	-2.643	11.661	.95139	.193	.430	1719.
330.	.02112	258.49	47.84	1.103	15.964	.96464	.189	.431	1650.
340.	.02196	235.22	43.53	4.810	20.276	.97751	.186	.431	1588.
350.	.02291	216.00	39.61	8.468	24.589	.99001	.184	.431	1532.
360.	.02390	200.61	36.09	12.064	28.884	1.00211	.182	.429	1482.
370.	.02496	188.50	32.93	15.595	33.161	1.01383	.180	.426	1437.
380.	.02608	179.40	30.12	19.045	37.396	1.02513	.179	.421	1399.
390.	.02725	172.67	27.64	22.406	41.579	1.03599	.178	.415	1366.
400.	.02846	168.26	25.46	25.674	45.698	1.04642	.177	.408	1340.
410.	.02970	165.61	23.54	28.845	49.740	1.05640	.177	.401	1319.
420.	.03098	164.33	21.85	31.921	53.704	1.06595	.176	.393	1302.
430.	.03224	164.16	20.36	34.906	57.589	1.07510	.176	.385	1290.
440.	.03353	165.13	19.05	37.803	61.394	1.08384	.176	.377	1281.
450.	.03482	166.92	17.88	40.614	65.117	1.09221	.175	.369	1276.
460.	.03612	169.35	16.82	43.343	68.758	1.10021	.175	.360	1273.
470.	.03741	172.29	15.88	45.994	72.318	1.10787	.174	.352	1271.
480.	.03870	175.56	15.02	48.569	75.797	1.11520	.173	.344	1272.
490.	.03997	179.17	14.25	51.074	79.202	1.12222	.172	.336	1274.
500.	.04124	183.08	13.55	53.513	82.534	1.12895	.171	.329	1277.
510.	.04250	187.12	12.91	55.888	85.794	1.13541	.170	.322	1282.
520.	.04375	191.27	12.33	58.204	88.989	1.14162	.169	.315	1287.
530.	.04498	195.48	11.80	60.463	92.116	1.14757	.168	.309	1292.
540.	.04621	199.75	11.31	62.671	95.185	1.15331	.166	.303	1299.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

4000. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 103.432	.01210	2250.75	321.54	-82.600	-73.635	.50678	.266	.395	3934.
105.	.01214	2228.26	317.01	-82.006	-73.016	.51272	.265	.395	3917.
110.	.01224	2156.96	303.44	-80.114	-71.046	.53105	.263	.393	3866.
115.	.01235	2086.29	290.97	-78.228	-69.082	.54851	.260	.392	3815.
120.	.01246	2016.25	279.39	-76.350	-67.124	.56518	.258	.391	3766.
125.	.01256	1946.87	268.56	-74.478	-65.172	.58111	.255	.390	3717.
130.	.01267	1878.20	258.33	-72.612	-63.225	.59638	.251	.389	3668.
135.	.01278	1810.32	248.63	-70.753	-61.284	.61104	.248	.388	3620.
140.	.01290	1743.30	239.38	-68.901	-59.347	.62512	.245	.387	3571.
145.	.01301	1677.24	230.51	-67.054	-57.416	.63868	.242	.386	3521.
150.	.01313	1612.23	221.99	-65.214	-55.489	.65174	.239	.385	3472.
155.	.01325	1548.38	213.78	-63.380	-53.566	.66435	.235	.384	3421.
160.	.01337	1485.78	205.84	-61.552	-51.647	.67653	.232	.383	3371.
165.	.01350	1424.53	198.15	-59.729	-49.731	.68832	.229	.383	3319.
170.	.01363	1364.74	190.69	-57.911	-47.818	.69974	.226	.382	3267.
175.	.01376	1306.49	183.45	-56.098	-45.908	.71082	.224	.382	3213.
180.	.01389	1249.86	176.41	-54.289	-43.999	.72158	.222	.382	3159.
185.	.01403	1194.93	169.57	-52.482	-42.090	.73204	.219	.382	3103.
190.	.01417	1141.77	162.93	-50.677	-40.180	.74222	.218	.382	3046.
195.	.01432	1090.41	156.47	-48.873	-38.269	.75216	.216	.383	2988.
200.	.01447	1040.90	150.21	-47.068	-36.354	.76186	.215	.383	2929.
205.	.01462	993.24	144.14	-45.262	-34.434	.77134	.215	.385	2870.
210.	.01478	947.42	138.27	-43.452	-32.508	.78062	.214	.386	2810.
215.	.01494	903.38	132.61	-41.640	-30.576	.78972	.214	.387	2751.
220.	.01510	861.05	127.17	-39.826	-28.638	.79862	.213	.387	2694.
225.	.01527	820.32	121.96	-38.014	-26.700	.80733	.210	.387	2643.
230.	.01545	781.02	117.00	-36.215	-24.771	.81581	.205	.383	2601.
235.	.01564	742.95	113.05	-34.455	-22.874	.82396	.204	.387	2554.
240.	.01583	706.83	108.57	-32.650	-20.928	.83215	.204	.389	2502.
245.	.01602	670.75	104.42	-30.846	-18.980	.84019	.203	.392	2451.
250.	.01622	637.73	100.34	-29.029	-17.012	.84814	.202	.394	2403.
255.	.01644	605.24	96.22	-27.211	-15.038	.85596	.200	.395	2353.
260.	.01665	573.98	92.23	-25.402	-13.068	.86361	.199	.397	2303.
265.	.01688	545.18	88.34	-23.579	-11.076	.87120	.197	.398	2255.
270.	.01712	517.74	84.66	-21.761	-9.083	.87865	.196	.399	2209.
275.	.01736	491.43	81.13	-19.940	-7.080	.88600	.195	.400	2163.
280.	.01762	466.14	77.73	-18.116	-5.067	.89326	.194	.402	2118.
285.	.01788	441.69	74.44	-16.297	-3.053	.90039	.193	.404	2072.
290.	.01815	418.46	71.20	-14.447	-1.000	.90754	.195	.409	2018.
295.	.01844	397.24	68.08	-12.601	1.057	.91458	.197	.413	1967.
300.	.01874	377.04	65.11	-10.746	3.133	.92155	.197	.417	1921.
310.	.01937	340.08	59.61	-7.024	7.322	.93529	.196	.421	1840.
320.	.02005	307.31	54.42	-3.315	11.537	.94867	.193	.423	1765.
330.	.02079	279.04	49.65	.366	15.767	.96169	.190	.423	1698.
340.	.02159	254.96	45.33	4.006	19.999	.97432	.186	.423	1637.
350.	.02245	234.80	41.43	7.599	24.230	.98659	.184	.423	1582.
360.	.02337	218.40	37.87	11.135	28.445	.99846	.182	.421	1531.
370.	.02435	205.21	34.68	14.610	32.643	1.00997	.180	.419	1486.
380.	.02537	195.01	31.83	18.014	36.809	1.02108	.179	.414	1447.
390.	.02645	187.15	29.28	21.337	40.926	1.03177	.178	.409	1412.
400.	.02756	181.68	27.03	24.579	44.992	1.04206	.177	.404	1384.
410.	.02870	178.11	25.04	27.732	48.991	1.05194	.177	.397	1361.
420.	.02987	175.96	23.28	30.798	52.922	1.06141	.177	.390	1342.
430.	.03105	174.99	21.72	33.781	56.783	1.07050	.176	.383	1328.
440.	.03226	175.19	20.32	36.682	60.573	1.07921	.176	.376	1317.
450.	.03346	176.29	19.08	39.504	64.290	1.08756	.175	.368	1309.
460.	.03468	178.08	17.97	42.248	67.932	1.09557	.175	.361	1304.
470.	.03589	180.47	16.97	44.918	71.500	1.10324	.174	.353	1302.
480.	.03709	183.26	16.06	47.515	74.991	1.11060	.173	.346	1300.
490.	.03830	186.46	15.23	50.044	78.412	1.11765	.173	.338	1301.
500.	.03950	190.00	14.48	52.509	81.763	1.12442	.172	.331	1303.
510.	.04068	193.73	13.80	54.910	85.045	1.13092	.171	.324	1306.
520.	.04187	197.60	13.17	57.253	88.262	1.13717	.169	.318	1310.
530.	.04303	201.58	12.60	59.538	91.412	1.14317	.168	.311	1315.
540.	.04419	205.65	12.07	61.771	94.504	1.14895	.167	.305	1320.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

4500. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 104.114	.01209	2278.85	321.78	-82.517	-72.445	.50746	.267	.395	3952.
105.	.01210	2266.30	319.23	-82.182	-72.096	.51080	.266	.395	3943.
110.	.01221	2195.82	305.63	-80.300	-70.127	.52912	.264	.393	3892.
115.	.01231	2125.97	293.15	-78.424	-68.165	.54656	.261	.392	3843.
120.	.01242	2056.73	281.57	-76.556	-66.209	.56320	.258	.390	3795.
125.	.01252	1988.15	270.72	-74.696	-64.260	.57912	.255	.389	3747.
130.	.01263	1920.26	260.50	-72.842	-62.317	.59436	.252	.388	3699.
135.	.01274	1853.15	250.81	-70.996	-60.380	.60898	.249	.387	3651.
140.	.01285	1786.89	241.57	-69.156	-58.448	.62303	.246	.386	3603.
145.	.01296	1721.58	232.72	-67.324	-56.522	.63655	.243	.385	3555.
150.	.01308	1657.31	224.22	-65.498	-54.601	.64957	.240	.384	3507.
155.	.01319	1594.17	216.04	-63.680	-52.685	.66214	.236	.383	3458.
160.	.01331	1532.28	208.13	-61.867	-50.773	.67427	.233	.382	3408.
165.	.01344	1471.71	200.48	-60.061	-48.866	.68601	.230	.381	3358.
170.	.01356	1412.57	193.07	-58.261	-46.962	.69738	.228	.380	3307.
175.	.01369	1354.95	185.88	-56.466	-45.061	.70840	.225	.380	3255.
180.	.01382	1298.92	178.90	-54.675	-43.162	.71910	.223	.380	3202.
185.	.01395	1244.56	172.12	-52.888	-41.264	.72950	.221	.379	3148.
190.	.01409	1191.93	165.53	-51.104	-39.367	.73962	.219	.380	3093.
195.	.01423	1141.07	159.14	-49.321	-37.468	.74949	.218	.380	3037.
200.	.01437	1092.02	152.94	-47.539	-35.566	.75912	.217	.381	2980.
205.	.01451	1044.77	146.93	-45.755	-33.660	.76853	.216	.382	2922.
210.	.01466	999.32	141.12	-43.969	-31.750	.77775	.216	.383	2864.
215.	.01482	955.63	135.52	-42.182	-29.834	.78676	.216	.384	2807.
220.	.01498	913.62	130.13	-40.393	-27.914	.79559	.214	.384	2752.
225.	.01514	873.18	124.97	-38.609	-25.995	.80421	.212	.383	2702.
230.	.01530	834.18	120.04	-36.839	-24.086	.81259	.207	.379	2663.
235.	.01548	797.00	116.30	-35.116	-22.218	.82062	.206	.383	2621.
240.	.01566	760.99	111.76	-33.344	-20.297	.82871	.205	.384	2570.
245.	.01584	725.30	107.64	-31.578	-18.380	.83662	.204	.386	2522.
250.	.01603	692.25	103.68	-29.799	-16.442	.84445	.203	.387	2476.
255.	.01622	659.90	99.77	-28.021	-14.501	.85214	.201	.389	2430.
260.	.01642	628.95	95.82	-26.252	-12.566	.85965	.200	.390	2382.
265.	.01664	600.00	91.97	-24.471	-10.609	.86711	.199	.390	2336.
270.	.01685	572.54	88.29	-22.697	-8.655	.87441	.197	.391	2292.
275.	.01708	546.07	84.79	-20.922	-6.694	.88161	.196	.391	2248.
280.	.01731	520.10	81.44	-19.149	-4.727	.88870	.195	.393	2204.
285.	.01755	495.87	78.27	-17.383	-2.763	.89565	.194	.394	2163.
290.	.01779	472.52	75.20	-15.588	-.763	.90263	.196	.399	2113.
295.	.01805	450.97	72.15	-13.796	1.243	.90948	.199	.403	2064.
300.	.01831	430.42	69.17	-11.997	3.262	.91627	.198	.405	2019.
310.	.01887	392.74	63.61	-8.397	7.326	.92960	.197	.407	1941.
320.	.01947	359.20	58.64	-4.818	11.402	.94254	.194	.409	1874.
330.	.02010	329.65	53.89	-1.269	15.484	.95510	.190	.408	1809.
340.	.02079	303.91	49.54	2.237	19.559	.96726	.187	.407	1750.
350.	.02151	281.76	45.61	5.695	23.622	.97904	.184	.406	1695.
360.	.02229	263.20	42.04	9.102	27.672	.99045	.182	.404	1646.
370.	.02310	247.72	38.78	12.459	31.708	1.00151	.180	.402	1600.
380.	.02396	235.17	35.84	15.759	35.721	1.01221	.179	.400	1559.
390.	.02485	224.95	33.18	18.992	39.697	1.02254	.178	.397	1522.
400.	.02577	217.08	30.78	22.164	43.639	1.03252	.178	.392	1490.
410.	.02673	211.36	28.64	25.267	47.537	1.04215	.177	.388	1464.
420.	.02773	207.26	26.72	28.299	51.383	1.05141	.177	.382	1441.
430.	.02878	204.46	25.00	31.261	55.175	1.06034	.177	.377	1422.
440.	.02971	202.82	23.45	34.157	58.916	1.06894	.176	.371	1407.
450.	.03074	202.23	22.06	36.986	62.600	1.07722	.176	.365	1395.
460.	.03177	202.37	20.81	39.748	66.223	1.08518	.176	.360	1386.
470.	.03281	203.32	19.67	42.445	69.786	1.09285	.175	.353	1379.
480.	.03385	204.88	18.64	45.078	73.286	1.10021	.174	.347	1375.
490.	.03489	206.94	17.70	47.649	76.726	1.10731	.174	.341	1372.
500.	.03594	209.47	16.83	50.162	80.106	1.11414	.173	.335	1371.
510.	.03697	212.33	16.04	52.614	83.423	1.12071	.172	.328	1371.
520.	.03801	215.43	15.31	55.010	86.680	1.12703	.171	.322	1372.
530.	.03903	218.79	14.64	57.350	89.874	1.13312	.170	.316	1374.
540.	.04005	222.31	14.02	59.638	93.011	1.13898	.169	.310	1377.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

5000. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 104.793	.01207	2306.82	322.02	-82.431	-71.257	.50812	.267	.394	3971.
105.	.01207	2303.92	321.42	-82.353	-71.176	.50890	.267	.394	3968.
110.	.01217	2234.24	307.80	-80.480	-69.208	.52721	.265	.393	3919.
115.	.01228	2165.17	295.30	-78.614	-67.247	.54464	.262	.391	3870.
120.	.01238	2096.71	283.71	-76.756	-65.294	.56127	.259	.390	3823.
125.	.01248	2028.88	272.86	-74.906	-63.347	.57716	.256	.389	3776.
130.	.01259	1961.74	262.63	-73.064	-61.408	.59237	.253	.387	3729.
135.	.01270	1895.37	252.94	-71.230	-59.474	.60697	.250	.386	3682.
140.	.01281	1829.83	243.71	-69.403	-57.547	.62098	.247	.385	3635.
145.	.01292	1765.22	234.88	-67.583	-55.625	.63447	.244	.384	3588.
150.	.01303	1701.64	226.40	-65.771	-53.710	.64745	.240	.382	3541.
155.	.01314	1639.18	218.24	-63.967	-51.800	.65998	.237	.381	3493.
160.	.01326	1577.94	210.36	-62.169	-49.895	.67207	.234	.380	3445.
165.	.01338	1518.01	202.74	-60.379	-47.995	.68377	.231	.380	3395.
170.	.01350	1459.48	195.37	-58.594	-46.099	.69509	.229	.379	3346.
175.	.01362	1402.43	188.22	-56.816	-44.206	.70606	.226	.378	3295.
180.	.01375	1346.95	181.28	-55.043	-42.317	.71670	.224	.378	3244.
185.	.01387	1293.11	174.55	-53.274	-40.429	.72705	.222	.377	3191.
190.	.01400	1240.96	168.02	-51.509	-38.542	.73712	.220	.377	3137.
195.	.01414	1190.54	161.68	-49.745	-36.654	.74693	.219	.378	3083.
200.	.01428	1141.89	155.53	-47.983	-34.765	.75650	.218	.378	3027.
205.	.01442	1095.01	149.58	-46.220	-32.872	.76585	.218	.379	2971.
210.	.01456	1049.89	143.82	-44.455	-30.974	.77500	.217	.380	2915.
215.	.01471	1006.49	138.27	-42.689	-29.072	.78395	.217	.381	2860.
220.	.01486	964.75	132.92	-40.924	-27.168	.79270	.216	.381	2807.
225.	.01501	924.56	127.79	-39.164	-25.265	.80125	.214	.379	2759.
230.	.01517	885.81	122.89	-37.419	-23.374	.80956	.208	.375	2720.
235.	.01533	849.53	118.29	-35.728	-21.531	.81748	.207	.379	2682.
240.	.01550	813.57	114.82	-33.984	-19.631	.82548	.206	.379	2634.
245.	.01567	778.39	110.67	-32.250	-17.738	.83328	.205	.380	2587.
250.	.01585	745.24	106.76	-30.505	-15.828	.84100	.204	.382	2544.
255.	.01604	713.03	103.00	-28.762	-13.916	.84858	.202	.383	2500.
260.	.01622	682.42	99.26	-27.028	-12.009	.85598	.201	.384	2457.
265.	.01642	653.22	95.38	-25.281	-10.081	.86333	.200	.384	2412.
270.	.01662	625.68	91.74	-23.543	-8.158	.87052	.198	.384	2369.
275.	.01682	598.99	88.23	-21.807	-6.230	.87759	.197	.384	2327.
280.	.01704	572.37	84.88	-20.076	-4.302	.88454	.196	.385	2284.
285.	.01726	548.33	81.72	-18.352	-2.376	.89136	.195	.386	2244.
290.	.01748	525.00	78.73	-16.602	-.419	.89818	.197	.390	2197.
295.	.01771	503.09	75.81	-14.856	1.543	.90489	.198	.394	2152.
300.	.01795	482.16	72.97	-13.103	3.518	.91153	.199	.397	2110.
310.	.01845	443.78	67.39	-9.597	7.488	.92455	.198	.398	2034.
320.	.01898	409.73	62.37	-6.120	11.457	.93715	.195	.397	1969.
330.	.01955	379.21	57.77	-2.674	15.426	.94936	.191	.397	1910.
340.	.02015	352.19	53.41	.728	19.383	.96117	.188	.395	1852.
350.	.02078	328.42	49.43	4.081	23.321	.97259	.185	.393	1799.
360.	.02145	308.10	45.82	7.385	27.242	.98364	.183	.392	1749.
370.	.02215	290.77	42.54	10.645	31.152	.99435	.181	.390	1704.
380.	.02288	276.31	39.52	13.858	35.044	1.00473	.180	.388	1662.
390.	.02364	264.26	36.78	17.013	38.903	1.01475	.179	.386	1625.
400.	.02443	254.34	34.29	20.117	42.739	1.02447	.178	.383	1591.
410.	.02525	246.64	32.03	23.168	46.545	1.03387	.178	.379	1561.
420.	.02609	240.77	29.99	26.160	50.312	1.04294	.177	.375	1536.
430.	.02694	236.37	28.13	29.094	54.036	1.05171	.177	.371	1514.
440.	.02781	233.09	26.46	31.970	57.720	1.06018	.177	.366	1495.
450.	.02870	230.93	24.94	34.790	61.359	1.06836	.176	.361	1480.
460.	.02959	229.47	23.57	37.550	64.946	1.07624	.176	.357	1467.
470.	.03049	228.98	22.32	40.254	68.486	1.08385	.176	.352	1457.
480.	.03140	229.31	21.17	42.902	71.973	1.09119	.175	.346	1450.
490.	.03231	230.20	20.13	45.495	75.410	1.09828	.174	.341	1444.
500.	.03322	231.61	19.17	48.035	78.797	1.10512	.174	.336	1440.
510.	.03414	233.53	18.28	50.521	82.128	1.11172	.173	.330	1438.
520.	.03505	235.81	17.46	52.954	85.405	1.11809	.172	.325	1437.
530.	.03596	238.48	16.70	55.335	88.626	1.12422	.171	.319	1437.
540.	.03686	241.39	16.00	57.666	91.795	1.13015	.170	.314	1438.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

6000. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_v BTU/LB-R	C_p BTU/LB-R	VELOCITY OF SOUND FT/S
* 106.140	.01203	2362.36	322.51	-82.256	-68.886	.50945	.268	.394	4007.
110.	.01211	2309.80	312.07	-80.823	-67.369	.52349	.266	.392	3970.
115.	.01221	2242.21	299.53	-78.976	-65.411	.54089	.264	.391	3923.
120.	.01231	2175.21	287.90	-77.137	-63.461	.55749	.261	.389	3877.
125.	.01241	2108.81	277.02	-75.307	-61.519	.57334	.258	.388	3832.
130.	.01251	2043.07	266.79	-73.485	-59.585	.58852	.255	.386	3787.
135.	.01261	1978.07	257.09	-71.673	-57.658	.60306	.252	.385	3742.
140.	.01272	1913.87	247.86	-69.868	-55.738	.61702	.249	.383	3697.
145.	.01282	1850.57	239.05	-68.073	-53.825	.63045	.245	.382	3652.
150.	.01293	1788.27	230.59	-66.286	-51.919	.64337	.242	.380	3606.
155.	.01304	1727.04	222.46	-64.507	-50.020	.65583	.239	.379	3560.
160.	.01315	1666.98	214.62	-62.736	-48.127	.66785	.236	.378	3514.
165.	.01326	1608.19	207.06	-60.974	-46.239	.67946	.234	.377	3467.
170.	.01339	1550.75	199.74	-59.218	-44.357	.69070	.231	.376	3419.
175.	.01349	1494.73	192.66	-57.470	-42.479	.70158	.229	.375	3371.
180.	.01361	1440.22	185.79	-55.728	-40.606	.71214	.226	.374	3322.
185.	.01373	1387.28	179.14	-53.991	-38.735	.72239	.225	.374	3272.
190.	.01385	1335.96	172.68	-52.258	-36.866	.73237	.223	.374	3221.
195.	.01398	1286.30	166.43	-50.529	-34.997	.74208	.222	.374	3169.
200.	.01411	1238.33	160.36	-48.801	-33.127	.75155	.221	.374	3116.
205.	.01424	1192.06	154.49	-47.073	-31.255	.76080	.221	.375	3063.
210.	.01437	1147.48	148.82	-45.345	-29.380	.76983	.220	.375	3009.
215.	.01451	1104.57	143.33	-43.617	-27.501	.77868	.220	.376	2957.
220.	.01464	1063.25	138.05	-41.890	-25.622	.78732	.219	.376	2906.
225.	.01478	1023.46	132.98	-40.170	-23.745	.79575	.217	.374	2861.
230.	.01493	985.09	128.11	-38.467	-21.883	.80393	.211	.369	2825.
235.	.01508	950.62	124.64	-36.830	-20.079	.81167	.210	.372	2792.
240.	.01523	914.68	120.33	-35.135	-18.215	.81953	.208	.371	2749.
245.	.01538	880.91	116.31	-33.451	-16.360	.82717	.207	.372	2708.
250.	.01554	847.37	112.43	-31.761	-14.492	.83472	.205	.372	2667.
255.	.01571	815.52	108.79	-30.076	-12.626	.84211	.204	.373	2628.
260.	.01587	785.63	105.29	-28.399	-10.767	.84933	.203	.374	2590.
265.	.01604	755.68	101.76	-26.711	-8.887	.85650	.202	.375	2550.
270.	.01622	727.84	98.20	-25.030	-7.010	.86351	.200	.375	2511.
275.	.01640	700.60	94.61	-23.354	-5.133	.87040	.199	.374	2470.
280.	.01658	673.33	91.32	-21.689	-3.265	.87713	.198	.374	2430.
285.	.01677	649.19	88.16	-20.029	-1.396	.88375	.197	.374	2393.
290.	.01696	626.31	85.13	-18.347	.500	.89036	.198	.377	2348.
295.	.01716	603.59	82.25	-16.671	2.396	.89684	.200	.381	2305.
300.	.01736	581.99	79.47	-14.990	4.302	.90325	.201	.383	2266.
310.	.01779	542.17	74.23	-11.630	8.130	.91580	.199	.384	2199.
320.	.01823	507.26	69.17	-8.297	11.954	.92794	.196	.382	2139.
330.	.01869	475.35	64.52	-5.005	15.762	.93966	.193	.380	2083.
340.	.01918	446.52	60.27	-1.757	19.549	.95097	.189	.378	2031.
350.	.01968	420.29	56.28	1.442	23.310	.96187	.186	.376	1981.
360.	.02021	397.32	52.60	4.596	27.052	.97241	.184	.374	1933.
370.	.02076	377.11	49.21	7.709	30.778	.98262	.182	.372	1889.
380.	.02134	359.70	46.10	10.784	34.491	.99253	.181	.370	1847.
390.	.02193	344.98	43.27	13.815	38.180	1.00211	.180	.368	1809.
400.	.02254	331.88	40.64	16.806	41.850	1.01140	.179	.367	1773.
410.	.02317	320.62	38.22	19.758	45.503	1.02042	.179	.364	1740.
420.	.02382	311.49	36.00	22.670	49.135	1.02918	.178	.362	1711.
430.	.02448	304.20	33.96	25.540	52.742	1.03766	.178	.359	1686.
440.	.02516	298.23	32.09	28.366	56.320	1.04589	.178	.356	1663.
450.	.02585	293.45	30.37	31.148	59.868	1.05386	.177	.352	1643.
460.	.02654	289.33	28.81	33.878	63.368	1.06156	.177	.349	1626.
470.	.02725	286.23	27.37	36.567	66.840	1.06902	.177	.346	1611.
480.	.02796	284.23	26.04	39.213	70.277	1.07626	.176	.342	1598.
490.	.02868	282.87	24.81	41.814	73.676	1.08327	.176	.338	1588.
500.	.02940	282.05	23.69	44.371	77.035	1.09006	.175	.334	1579.
510.	.03013	282.05	22.64	46.884	80.356	1.09663	.174	.330	1573.
520.	.03086	282.67	21.67	49.354	83.637	1.10300	.174	.326	1568.
530.	.03159	283.82	20.77	51.779	86.874	1.10917	.173	.322	1565.
540.	.03232	285.38	19.93	54.162	90.069	1.11514	.172	.317	1562.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

7000. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 107.474	.01200	2417.41	323.03	-82.075	-66.522	.51375	.270	.393	4042.
110.	.01205	2383.77	316.25	-81.146	-65.530	.51987	.268	.392	4019.
115.	.01214	2317.57	303.65	-79.315	-63.574	.53726	.265	.390	3974.
120.	.01224	2251.92	291.98	-77.434	-61.627	.55384	.262	.389	3930.
125.	.01234	2186.84	281.07	-75.682	-59.688	.56966	.259	.387	3886.
130.	.01244	2122.40	270.81	-73.879	-57.758	.58480	.256	.385	3843.
135.	.01254	2058.65	261.10	-72.086	-55.837	.59930	.253	.383	3799.
140.	.01264	1995.68	251.86	-70.302	-53.923	.61322	.250	.382	3756.
145.	.01274	1933.57	243.04	-68.528	-52.017	.62659	.247	.380	3712.
150.	.01284	1872.40	234.59	-66.763	-50.119	.63946	.244	.379	3668.
155.	.01294	1812.28	226.48	-65.007	-48.229	.65186	.241	.377	3624.
160.	.01305	1753.28	218.67	-63.260	-46.345	.66382	.238	.376	3579.
165.	.01316	1695.49	211.13	-61.521	-44.468	.67537	.236	.375	3534.
170.	.01326	1639.00	203.85	-59.791	-42.597	.68654	.233	.374	3488.
175.	.01338	1583.88	196.81	-58.069	-40.732	.69736	.231	.373	3442.
180.	.01349	1530.20	190.00	-56.353	-38.871	.70784	.229	.372	3395.
185.	.01360	1478.02	183.39	-54.644	-37.014	.71802	.227	.371	3347.
190.	.01372	1427.40	177.00	-52.939	-35.159	.72791	.225	.371	3298.
195.	.01383	1378.37	170.80	-51.238	-33.306	.73754	.224	.371	3248.
200.	.01395	1330.96	164.79	-49.539	-31.452	.74693	.224	.371	3197.
205.	.01408	1285.18	158.98	-47.841	-29.597	.75610	.223	.371	3146.
210.	.01420	1241.02	153.36	-46.144	-27.739	.76505	.223	.372	3095.
215.	.01432	1198.47	147.93	-44.447	-25.879	.77381	.223	.372	3044.
220.	.01445	1157.47	142.70	-42.752	-24.018	.78236	.222	.372	2996.
225.	.01458	1117.97	137.65	-41.064	-22.162	.79070	.220	.373	2953.
230.	.01471	1079.86	132.81	-39.394	-20.321	.79879	.214	.365	2919.
235.	.01485	1047.19	129.84	-37.800	-18.548	.80639	.213	.367	2895.
240.	.01499	1011.24	125.20	-36.143	-16.711	.81413	.211	.365	2851.
245.	.01513	979.33	121.32	-34.500	-14.885	.82166	.209	.365	2816.
250.	.01528	945.25	117.60	-32.853	-13.051	.82908	.207	.365	2779.
255.	.01543	913.85	114.01	-31.213	-11.219	.83633	.206	.366	2743.
260.	.01557	884.77	110.65	-29.582	-9.395	.84341	.205	.366	2709.
265.	.01573	853.81	107.31	-27.943	-7.555	.85042	.203	.367	2672.
270.	.01589	825.51	103.92	-26.308	-5.716	.85730	.202	.367	2636.
275.	.01605	797.62	100.60	-24.679	-3.878	.86405	.201	.367	2599.
280.	.01621	771.20	97.27	-23.062	-2.050	.87063	.200	.367	2562.
285.	.01638	746.18	94.02	-21.449	-.221	.87711	.198	.366	2526.
290.	.01655	723.88	91.01	-19.815	1.633	.88357	.200	.368	2485.
295.	.01672	700.45	88.13	-18.191	3.482	.88990	.202	.371	2443.
300.	.01690	678.53	85.37	-16.564	5.340	.89614	.202	.373	2406.
310.	.01726	637.26	80.09	-13.311	9.066	.90836	.201	.373	2342.
320.	.01765	601.06	75.14	-10.084	12.789	.92018	.198	.371	2286.
330.	.01804	567.94	70.51	-6.897	16.491	.93157	.194	.368	2234.
340.	.01846	538.05	66.23	-3.759	20.164	.94254	.191	.366	2186.
350.	.01888	510.04	62.28	-.671	23.804	.95309	.188	.364	2138.
360.	.01932	485.36	58.54	2.378	27.426	.96329	.186	.361	2093.
370.	.01978	462.80	55.07	5.386	31.028	.97317	.184	.359	2049.
380.	.02026	443.01	51.90	8.361	34.618	.98274	.182	.358	2008.
390.	.02075	426.11	48.97	11.299	38.189	.99202	.181	.356	1970.
400.	.02125	410.83	46.28	14.200	41.741	1.00101	.180	.355	1935.
410.	.02176	396.72	43.76	17.069	45.275	1.00974	.180	.353	1900.
420.	.02229	384.70	41.42	19.909	48.800	1.01823	.180	.352	1869.
430.	.02283	374.67	39.24	22.718	52.311	1.02649	.179	.350	1841.
440.	.02338	366.29	37.23	25.493	55.802	1.03452	.179	.348	1816.
450.	.02395	359.40	35.37	28.233	59.272	1.04232	.179	.345	1793.
460.	.02451	353.52	33.66	30.927	62.698	1.04985	.178	.342	1773.
470.	.02508	348.40	32.07	33.587	66.101	1.05717	.178	.340	1755.
480.	.02567	344.27	30.59	36.213	69.482	1.06428	.177	.337	1739.
490.	.02625	340.98	29.23	38.801	72.831	1.07119	.177	.334	1726.
500.	.02685	338.26	27.97	41.349	76.147	1.07789	.176	.331	1714.
510.	.02744	336.43	26.79	43.864	79.436	1.08440	.176	.327	1704.
520.	.02805	335.40	25.68	46.342	82.696	1.09073	.175	.324	1696.
530.	.02865	334.88	24.65	48.782	85.921	1.09688	.174	.320	1690.
540.	.02926	334.94	23.70	51.185	89.112	1.10284	.173	.317	1685.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

8000. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 108.796	.01197	2471.97	323.56	-81.889	-64.164	.51203	.270	.393	4077.
110.	.01199	2456.27	320.35	-81.450	-63.692	.51635	.270	.392	4067.
115.	.01208	2391.37	307.69	-79.634	-61.737	.53373	.267	.390	4023.
120.	.01218	2326.99	295.96	-77.828	-59.791	.55029	.264	.388	3980.
125.	.01227	2263.15	285.01	-76.033	-57.856	.56609	.261	.386	3938.
130.	.01237	2199.90	274.71	-74.247	-55.929	.58120	.258	.384	3896.
135.	.01246	2137.32	264.97	-72.472	-54.012	.59568	.255	.383	3854.
140.	.01256	2075.47	255.72	-70.707	-52.104	.60956	.252	.381	3812.
145.	.01266	2014.44	246.88	-68.951	-50.204	.62289	.249	.379	3770.
150.	.01275	1954.31	238.43	-67.206	-48.312	.63571	.246	.377	3727.
155.	.01285	1895.18	230.32	-65.471	-46.429	.64806	.243	.376	3684.
160.	.01296	1837.13	222.52	-63.745	-44.553	.65997	.240	.374	3641.
165.	.01306	1780.24	215.00	-62.028	-42.685	.67147	.238	.373	3598.
170.	.01316	1724.59	207.74	-60.320	-40.823	.68259	.235	.372	3553.
175.	.01327	1670.25	200.72	-58.620	-38.968	.69334	.233	.370	3508.
180.	.01337	1617.29	193.94	-56.928	-37.118	.70377	.231	.370	3463.
185.	.01348	1565.78	187.37	-55.242	-35.272	.71388	.229	.369	3416.
190.	.01359	1515.75	181.01	-53.561	-33.429	.72371	.228	.368	3369.
195.	.01370	1467.25	174.85	-51.885	-31.588	.73328	.227	.368	3321.
200.	.01381	1420.30	168.89	-50.211	-29.747	.74260	.226	.368	3272.
205.	.01393	1374.92	163.12	-48.538	-27.905	.75170	.226	.369	3223.
210.	.01404	1331.10	157.54	-46.866	-26.062	.76059	.226	.369	3173.
215.	.01416	1288.83	152.14	-45.195	-24.216	.76928	.226	.369	3125.
220.	.01428	1248.07	146.93	-43.526	-22.371	.77776	.225	.369	3079.
225.	.01440	1208.76	141.92	-41.865	-20.530	.78603	.223	.367	3037.
230.	.01452	1170.83	137.09	-40.222	-18.706	.79404	.217	.361	3004.
235.	.01465	1139.97	135.21	-38.671	-16.963	.80151	.215	.365	2992.
240.	.01478	1103.99	130.12	-37.040	-15.142	.80918	.213	.362	2948.
245.	.01491	1074.40	125.82	-35.427	-13.336	.81663	.211	.359	2914.
250.	.01505	1039.65	122.23	-33.818	-11.530	.82393	.209	.359	2879.
255.	.01518	1008.80	118.91	-32.215	-9.726	.83107	.207	.360	2849.
260.	.01532	980.58	115.59	-30.621	-7.928	.83806	.205	.360	2818.
265.	.01546	948.41	112.32	-29.024	-6.123	.84493	.203	.361	2793.
270.	.01560	919.55	109.22	-27.429	-4.316	.85169	.203	.361	2751.
275.	.01575	890.93	106.05	-25.838	-2.509	.85832	.202	.362	2716.
280.	.01590	866.77	102.75	-24.257	-.710	.86480	.201	.361	2683.
285.	.01605	840.85	99.58	-22.682	1.087	.87117	.200	.360	2649.
290.	.01620	818.55	96.42	-21.082	2.915	.87754	.202	.362	2608.
295.	.01635	794.71	93.49	-19.499	4.728	.88374	.203	.364	2567.
300.	.01651	773.21	90.74	-17.912	6.550	.88987	.204	.365	2533.
310.	.01684	730.73	85.58	-14.744	10.200	.90183	.202	.365	2473.
320.	.01718	692.12	80.68	-11.599	13.847	.91341	.199	.364	2419.
330.	.01753	657.46	75.93	-8.491	17.473	.92457	.196	.361	2367.
340.	.01789	627.02	71.47	-5.431	21.068	.93531	.192	.357	2320.
350.	.01826	597.76	67.57	-2.429	24.619	.94560	.189	.354	2277.
360.	.01864	572.19	63.94	.540	28.155	.95556	.187	.352	2236.
370.	.01904	547.44	60.45	3.471	31.669	.96519	.185	.351	2192.
380.	.01944	525.37	57.07	6.369	35.170	.97453	.184	.348	2149.
390.	.01986	505.96	54.05	9.234	38.654	.98358	.182	.347	2111.
400.	.02029	489.30	51.30	12.065	42.118	.99235	.182	.346	2077.
410.	.02072	473.49	48.76	14.864	45.560	1.00085	.181	.345	2044.
420.	.02117	459.21	46.38	17.641	48.998	1.00913	.181	.344	2012.
430.	.02162	446.69	44.11	20.395	52.430	1.01721	.180	.343	1983.
440.	.02209	435.50	41.98	23.122	55.847	1.02506	.180	.341	1955.
450.	.02257	426.45	39.99	25.823	59.253	1.03272	.180	.339	1930.
460.	.02305	419.73	38.17	28.485	62.624	1.04013	.179	.336	1909.
470.	.02353	413.24	36.47	31.116	65.972	1.04733	.179	.334	1890.
480.	.02402	407.12	34.87	33.717	69.301	1.05434	.179	.332	1872.
490.	.02452	402.25	33.38	36.285	72.605	1.06115	.178	.329	1856.
500.	.02502	398.17	31.99	38.819	75.877	1.06776	.178	.326	1842.
510.	.02552	394.65	30.71	41.323	79.131	1.07421	.177	.324	1830.
520.	.02603	391.96	29.49	43.797	82.362	1.08048	.176	.321	1819.
530.	.02655	389.68	28.36	46.237	85.562	1.08658	.175	.318	1810.
540.	.02706	388.11	27.29	48.644	88.736	1.09251	.174	.315	1802.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

9000. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 110.105	.01193	2526.06	324.09	-81.699	-61.813	.51330	.271	.392	4112.
115.	.01202	2463.74	311.64	-79.935	-59.899	.53030	.269	.390	4071.
120.	.01211	2400.55	299.86	-78.143	-57.956	.54685	.266	.388	4029.
125.	.01221	2337.86	288.85	-76.363	-56.022	.56264	.263	.386	3988.
130.	.01230	2275.73	278.51	-74.593	-54.098	.57772	.260	.384	3947.
135.	.01239	2214.23	268.73	-72.834	-52.185	.59217	.257	.382	3907.
140.	.01248	2153.41	259.45	-71.085	-50.280	.60602	.254	.380	3866.
145.	.01258	2093.38	250.59	-69.347	-48.385	.61932	.251	.378	3825.
150.	.01267	2034.21	242.13	-67.620	-46.499	.63211	.248	.376	3784.
155.	.01277	1975.99	234.00	-65.902	-44.621	.64442	.245	.375	3742.
160.	.01287	1918.79	226.20	-64.195	-42.752	.65629	.242	.373	3700.
165.	.01298	1862.71	218.68	-62.497	-40.891	.66774	.240	.371	3658.
170.	.01308	1807.81	211.43	-60.809	-39.037	.67881	.237	.370	3615.
175.	.01316	1754.17	204.42	-59.129	-37.190	.68952	.235	.369	3571.
180.	.01327	1701.85	197.66	-57.457	-35.349	.69989	.233	.368	3527.
185.	.01337	1650.91	191.11	-55.792	-33.513	.70996	.231	.367	3482.
190.	.01347	1601.39	184.77	-54.132	-31.680	.71973	.230	.366	3436.
195.	.01358	1553.34	178.64	-52.477	-29.849	.72925	.229	.366	3389.
200.	.01368	1506.78	172.70	-50.825	-28.018	.73852	.229	.366	3342.
205.	.01379	1461.73	166.96	-49.174	-26.188	.74756	.229	.366	3294.
210.	.01390	1418.19	161.40	-47.524	-24.355	.75640	.229	.367	3246.
215.	.01401	1376.13	156.02	-45.874	-22.522	.76503	.228	.367	3199.
220.	.01412	1335.55	150.83	-44.228	-20.688	.77345	.228	.366	3154.
225.	.01424	1296.37	145.83	-42.589	-18.860	.78167	.225	.364	3114.
230.	.01435	1258.56	141.01	-40.968	-17.049	.78962	.220	.359	3083.
235.	.01447	1229.50	140.11	-39.462	-15.339	.79694	.219	.364	3080.
240.	.01459	1193.51	134.84	-37.850	-13.528	.80457	.216	.360	3037.
245.	.01472	1166.61	130.12	-36.256	-11.730	.81199	.213	.356	3004.
250.	.01484	1131.12	126.25	-34.679	-9.947	.81920	.210	.354	2970.
255.	.01497	1100.89	123.15	-33.108	-8.167	.82625	.208	.354	2944.
260.	.01509	1073.59	120.15	-31.545	-6.392	.83314	.207	.354	2919.
265.	.01522	1040.07	117.20	-29.984	-4.616	.83990	.205	.356	2888.
270.	.01535	1010.57	114.03	-28.424	-2.835	.84656	.204	.356	2856.
275.	.01549	981.17	111.03	-26.870	-1.059	.85308	.203	.357	2824.
280.	.01562	959.47	108.13	-25.317	.720	.85949	.202	.357	2798.
285.	.01576	934.59	105.01	-23.771	2.494	.86577	.202	.356	2766.
290.	.01590	910.72	101.67	-22.198	4.302	.87208	.203	.358	2723.
295.	.01604	887.02	98.62	-20.645	6.091	.87819	.205	.359	2683.
300.	.01619	867.04	95.60	-19.087	7.889	.88424	.205	.359	2649.
310.	.01648	823.98	90.49	-15.988	11.478	.89601	.203	.358	2593.
320.	.01678	781.27	85.76	-12.913	15.059	.90738	.200	.358	2541.
330.	.01710	744.32	81.22	-9.872	18.624	.91835	.197	.356	2494.
340.	.01742	713.73	76.69	-6.868	22.168	.92893	.194	.352	2448.
350.	.01775	683.60	72.37	-3.926	25.658	.93905	.191	.348	2400.
360.	.01809	657.94	68.54	-1.022	29.129	.94883	.188	.344	2360.
370.	.01844	630.93	65.25	1.839	32.568	.95825	.186	.344	2321.
380.	.01880	606.37	62.06	4.678	36.001	.96740	.185	.343	2282.
390.	.01916	583.56	58.81	7.488	39.419	.97628	.184	.341	2239.
400.	.01953	566.13	55.80	10.266	42.822	.98490	.183	.338	2202.
410.	.01991	550.21	53.20	13.009	46.197	.99323	.182	.337	2171.
420.	.02030	534.74	50.79	15.731	49.564	1.00135	.182	.336	2141.
430.	.02070	520.28	48.52	18.434	52.927	1.00926	.181	.336	2112.
440.	.02110	505.32	46.40	21.112	56.273	1.01695	.181	.336	2083.
450.	.02151	493.39	44.35	23.775	59.622	1.02448	.181	.335	2056.
460.	.02193	486.68	42.39	26.414	62.958	1.03181	.181	.332	2035.
470.	.02235	479.43	40.56	29.019	66.265	1.03892	.180	.329	2015.
480.	.02277	471.38	38.87	31.594	69.546	1.04583	.180	.328	1995.
490.	.02320	465.26	37.31	34.143	72.812	1.05257	.179	.325	1978.
500.	.02364	460.45	35.82	36.663	76.053	1.05911	.179	.323	1963.
510.	.02407	455.38	34.42	39.153	79.272	1.06549	.178	.320	1948.
520.	.02452	450.95	33.10	41.617	82.473	1.07171	.177	.318	1935.
530.	.02496	446.83	31.87	44.047	85.644	1.07774	.177	.316	1924.
540.	.02541	443.55	30.72	46.450	88.792	1.08363	.176	.313	1914.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

10000. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM OERIVATIVE FT^3-PSIA/LB	ISOCHORE OERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 111.403	.01190	2579.69	324.63	-81.504	-59.468	.51455	.272	.391	4147.
115.	.01196	2534.77	315.53	-80.218	-58.063	.52696	.270	.390	4117.
120.	.01205	2472.70	303.67	-78.440	-56.120	.54350	.267	.387	4077.
125.	.01214	2411.10	292.61	-76.673	-54.188	.55928	.264	.385	4037.
130.	.01223	2350.02	282.21	-74.918	-52.266	.57435	.261	.383	3997.
135.	.01232	2289.52	272.39	-73.173	-50.355	.58877	.258	.381	3957.
140.	.01241	2229.67	263.07	-71.440	-48.454	.60260	.255	.379	3918.
145.	.01250	2170.56	254.18	-69.717	-46.563	.61587	.252	.377	3878.
150.	.01260	2112.27	245.69	-68.006	-44.681	.62863	.249	.375	3838.
155.	.01269	2054.88	237.55	-66.305	-42.808	.64091	.247	.374	3797.
160.	.01278	1998.47	229.72	-64.614	-40.945	.65274	.244	.372	3756.
165.	.01288	1943.12	222.20	-62.934	-39.090	.66416	.241	.370	3715.
170.	.01297	1888.90	214.94	-61.263	-37.242	.67519	.239	.369	3673.
175.	.01307	1835.88	207.94	-59.601	-35.402	.68586	.237	.367	3631.
180.	.01317	1784.13	201.18	-57.947	-33.568	.69619	.235	.366	3588.
185.	.01326	1733.70	194.64	-56.300	-31.739	.70621	.234	.365	3544.
190.	.01336	1684.63	188.31	-54.659	-29.914	.71595	.232	.365	3499.
195.	.01346	1636.97	182.19	-53.022	-28.092	.72542	.232	.364	3454.
200.	.01356	1590.74	176.27	-51.388	-26.270	.73465	.231	.364	3408.
205.	.01367	1545.96	170.53	-49.756	-24.448	.74365	.231	.364	3361.
210.	.01377	1502.64	164.99	-48.125	-22.625	.75243	.231	.365	3314.
215.	.01388	1460.75	159.62	-46.495	-20.801	.76102	.231	.365	3269.
220.	.01398	1420.29	154.44	-44.867	-18.978	.76940	.230	.364	3225.
225.	.01409	1381.21	149.44	-43.247	-17.160	.77757	.228	.362	3186.
230.	.01420	1343.45	144.62	-41.646	-15.359	.78548	.223	.357	3155.
235.	.01431	1316.19	143.67	-40.180	-13.679	.79267	.222	.362	3152.
240.	.01442	1280.23	138.79	-38.586	-11.876	.80026	.220	.359	3113.
245.	.01454	1256.37	133.83	-37.002	-10.078	.80767	.216	.353	3082.
250.	.01465	1220.07	129.53	-35.449	-8.313	.81481	.213	.350	3047.
255.	.01477	1190.53	126.30	-33.906	-6.551	.82179	.210	.348	3024.
260.	.01489	1164.19	123.70	-32.373	-4.797	.82860	.208	.348	3006.
265.	.01501	1129.19	121.36	-30.848	-3.051	.83525	.206	.350	2982.
270.	.01513	1098.99	118.77	-29.320	-1.296	.84181	.205	.352	2957.
275.	.01526	1068.78	115.95	-27.796	.456	.84824	.204	.353	2928.
280.	.01538	1047.37	112.84	-26.267	2.219	.85459	.203	.352	2901.
285.	.01551	1028.70	110.03	-24.747	3.975	.86081	.202	.352	2878.
290.	.01564	1000.54	107.22	-23.200	5.762	.86704	.204	.355	2838.
295.	.01577	977.74	104.04	-21.668	7.535	.87311	.206	.357	2798.
300.	.01590	960.79	100.65	-20.127	9.324	.87912	.207	.355	2764.
310.	.01617	918.17	94.79	-17.078	12.872	.89075	.205	.352	2703.
320.	.01645	869.23	90.27	-14.070	16.390	.90192	.202	.352	2651.
330.	.01673	828.87	85.91	-11.091	19.897	.91272	.198	.351	2606.
340.	.01703	798.40	81.70	-8.136	23.399	.92317	.195	.348	2568.
350.	.01733	767.77	77.43	-5.238	26.848	.93317	.192	.344	2523.
360.	.01764	742.78	73.16	-2.370	30.287	.94286	.190	.340	2479.
370.	.01795	713.29	69.23	.435	33.665	.95211	.188	.336	2431.
380.	.01826	685.86	66.24	3.211	37.030	.96108	.186	.337	2395.
390.	.01859	658.28	63.38	5.963	40.380	.96979	.185	.338	2357.
400.	.01892	640.59	60.46	8.708	43.746	.97831	.184	.336	2324.
410.	.01926	626.56	57.34	11.420	47.086	.98656	.184	.332	2288.
420.	.01961	611.32	54.71	14.100	50.404	.99455	.183	.330	2257.
430.	.01996	595.84	52.46	16.757	53.709	1.00233	.183	.329	2230.
440.	.02032	575.73	50.34	19.381	56.979	1.00985	.182	.330	2198.
450.	.02066	559.61	48.31	21.999	60.264	1.01723	.182	.331	2169.
460.	.02104	553.70	46.35	24.620	63.580	1.02452	.182	.328	2152.
470.	.02141	546.23	44.49	27.206	66.860	1.03158	.181	.326	2133.
480.	.02179	536.25	42.70	29.756	70.099	1.03840	.181	.324	2110.
490.	.02217	529.15	41.00	32.288	73.335	1.04507	.181	.322	2092.
500.	.02255	524.23	39.42	34.795	76.554	1.05157	.180	.320	2077.
510.	.02294	517.74	37.96	37.270	79.742	1.05788	.179	.318	2061.
520.	.02333	511.44	36.58	39.721	82.913	1.06404	.179	.316	2047.
530.	.02371	505.44	35.25	42.139	86.052	1.07002	.178	.313	2032.
540.	.02411	500.40	34.01	44.532	89.173	1.07585	.177	.311	2020.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

11000. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 112.690	.01187	2632.87	325.16	-81.305	-57.129	.51578	.273	.391	4180.
115.	.01191	2604.55	319.34	-80.485	-56.228	.52370	.272	.390	4162.
120.	.01200	2543.55	307.41	-78.719	-54.285	.54024	.269	.387	4123.
125.	.01208	2482.98	296.29	-76.965	-52.354	.55601	.266	.385	4084.
130.	.01217	2422.88	285.83	-75.223	-50.434	.57107	.263	.383	4045.
135.	.01226	2363.32	275.96	-73.492	-48.524	.58548	.260	.381	4006.
140.	.01235	2304.38	266.58	-71.773	-46.626	.59928	.257	.379	3968.
145.	.01243	2246.13	257.66	-70.064	-44.738	.61254	.254	.377	3929.
150.	.01252	2188.65	249.13	-68.367	-42.859	.62527	.251	.375	3890.
155.	.01261	2132.03	240.96	-66.681	-40.991	.63752	.248	.373	3850.
160.	.01270	2076.34	233.12	-65.006	-39.132	.64933	.246	.371	3810.
165.	.01279	2021.66	225.57	-63.341	-37.281	.66071	.243	.369	3770.
170.	.01289	1968.06	218.30	-61.686	-35.439	.67171	.241	.368	3729.
175.	.01298	1915.60	211.29	-60.039	-33.605	.68235	.239	.366	3688.
180.	.01307	1864.36	204.52	-58.402	-31.777	.69265	.237	.365	3646.
185.	.01317	1814.38	197.98	-56.771	-29.954	.70263	.236	.364	3603.
190.	.01326	1765.71	191.66	-55.146	-28.136	.71234	.235	.363	3559.
195.	.01336	1718.39	185.54	-53.526	-26.320	.72177	.234	.363	3515.
200.	.01345	1672.44	179.62	-51.908	-24.506	.73096	.234	.363	3470.
205.	.01355	1627.89	173.89	-50.293	-22.692	.73992	.234	.363	3424.
210.	.01365	1584.74	168.34	-48.678	-20.876	.74868	.234	.363	3378.
215.	.01375	1542.99	162.98	-47.064	-19.059	.75723	.234	.363	3333.
220.	.01385	1502.61	157.80	-45.452	-17.244	.76557	.233	.363	3291.
225.	.01395	1463.58	152.80	-43.848	-15.434	.77370	.231	.360	3252.
230.	.01405	1425.85	147.97	-42.264	-13.641	.78158	.226	.355	3222.
235.	.01416	1400.37	146.70	-40.832	-11.985	.78866	.225	.359	3218.
240.	.01427	1364.49	142.01	-39.254	-10.191	.79621	.223	.357	3179.
245.	.01438	1343.96	137.06	-37.678	-8.389	.80364	.220	.351	3152.
250.	.01449	1306.82	132.18	-36.141	-6.632	.81074	.216	.346	3112.
255.	.01460	1278.04	128.15	-34.618	-4.884	.81766	.213	.342	3086.
260.	.01471	1252.68	125.79	-33.111	-3.147	.82441	.209	.341	3074.
265.	.01482	1216.12	123.71	-31.624	-1.433	.83093	.207	.343	3054.
270.	.01494	1185.15	122.46	-30.130	.293	.83739	.205	.346	3044.
275.	.01505	1154.10	120.21	-28.638	2.018	.84372	.204	.349	3021.
280.	.01517	1127.20	117.91	-27.134	3.764	.85001	.203	.351	3000.
285.	.01529	1124.40	114.92	-25.626	5.519	.85622	.203	.348	2989.
290.	.01541	1088.00	111.86	-24.109	7.279	.86236	.205	.352	2941.
295.	.01553	1067.05	109.21	-22.598	9.037	.86837	.207	.354	2908.
300.	.01566	1054.98	106.33	-21.067	10.825	.87438	.208	.354	2884.
310.	.01591	1014.24	99.67	-18.047	14.355	.88596	.206	.349	2817.
320.	.01616	956.62	94.03	-15.095	17.818	.89695	.203	.346	2749.
330.	.01642	911.41	90.07	-12.175	21.268	.90757	.199	.346	2707.
340.	.01669	881.25	85.99	-9.266	24.733	.91791	.196	.343	2674.
350.	.01696	850.43	82.18	-6.412	28.142	.92780	.193	.341	2638.
360.	.01725	826.89	78.05	-3.571	31.561	.93743	.191	.337	2599.
370.	.01753	794.59	74.01	-.800	34.903	.94658	.190	.335	2549.
380.	.01781	763.73	69.98	1.934	38.220	.95543	.188	.331	2497.
390.	.01810	729.67	67.00	4.622	41.493	.96393	.187	.332	2453.
400.	.01841	712.16	64.37	7.327	44.819	.97235	.186	.332	2428.
410.	.01872	702.36	61.72	10.019	48.145	.98057	.185	.329	2406.
420.	.01903	689.09	58.94	12.681	51.445	.98852	.185	.327	2376.
430.	.01935	673.83	56.12	15.310	54.717	.99622	.184	.323	2342.
440.	.01965	646.93	53.84	17.877	57.904	1.00355	.184	.325	2301.
450.	.01997	624.78	51.90	20.445	61.116	1.01076	.183	.327	2271.
460.	.02031	620.37	49.87	23.050	64.422	1.01803	.183	.324	2256.
470.	.02065	613.19	48.00	25.616	67.680	1.02504	.183	.322	2239.
480.	.02098	601.22	46.29	28.138	70.877	1.03177	.182	.322	2218.
490.	.02132	593.39	44.60	30.654	74.089	1.03839	.182	.320	2201.
500.	.02167	588.97	42.90	33.155	77.300	1.04488	.181	.317	2186.
510.	.02202	581.17	41.33	35.616	80.461	1.05114	.180	.315	2168.
520.	.02236	572.81	39.85	38.050	83.600	1.05723	.180	.313	2151.
530.	.02271	564.90	38.48	40.453	86.705	1.06315	.179	.311	2135.
540.	.02306	558.08	37.20	42.835	89.798	1.06893	.178	.310	2121.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

12000. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 113.963	.01184	2685.65	325.70	-81.102	-54.798	.51699	.274	.390	4214.
115.	.01186	2673.16	323.09	-80.737	-54.393	.52052	.273	.390	4206.
120.	.01194	2613.18	311.09	-78.983	-52.450	.53706	.270	.387	4167.
125.	.01203	2553.58	299.89	-77.240	-50.520	.55282	.267	.385	4129.
130.	.01211	2494.41	289.37	-75.510	-48.601	.56787	.264	.383	4092.
135.	.01220	2435.74	279.43	-73.792	-46.693	.58227	.261	.380	4054.
140.	.01228	2377.65	270.01	-72.085	-44.796	.59607	.258	.378	4016.
145.	.01237	2320.20	261.04	-70.390	-42.910	.60930	.255	.376	3978.
150.	.01245	2263.49	252.47	-68.706	-41.035	.62202	.253	.374	3940.
155.	.01254	2207.58	244.26	-67.034	-39.170	.63425	.250	.372	3901.
160.	.01263	2152.55	236.39	-65.372	-37.314	.64603	.247	.370	3862.
165.	.01271	2098.49	228.82	-63.721	-35.468	.65739	.245	.368	3822.
170.	.01280	2045.45	221.53	-62.080	-33.630	.66836	.243	.367	3782.
175.	.01289	1993.51	214.50	-60.448	-31.800	.67897	.241	.365	3742.
180.	.01298	1942.73	207.71	-58.824	-29.977	.68924	.239	.364	3701.
185.	.01307	1893.16	201.16	-57.208	-28.160	.69920	.238	.363	3659.
190.	.01316	1844.84	194.83	-55.598	-26.347	.70888	.237	.362	3616.
195.	.01326	1797.82	188.70	-53.992	-24.537	.71828	.236	.362	3572.
200.	.01335	1752.12	182.77	-52.389	-22.729	.72744	.236	.362	3528.
205.	.01344	1707.76	177.04	-50.788	-20.920	.73637	.236	.362	3483.
210.	.01354	1664.75	171.49	-49.187	-19.111	.74510	.236	.362	3439.
215.	.01363	1623.09	166.13	-47.587	-17.300	.75362	.236	.362	3395.
220.	.01373	1582.77	160.94	-45.990	-15.491	.76194	.236	.361	3353.
225.	.01382	1543.75	155.93	-44.400	-13.688	.77004	.234	.359	3315.
230.	.01392	1506.02	151.08	-42.829	-11.902	.77788	.228	.354	3286.
235.	.01402	1482.32	149.53	-41.427	-10.264	.78488	.228	.357	3279.
240.	.01412	1446.56	144.86	-39.863	-8.476	.79240	.227	.355	3241.
245.	.01423	1429.64	139.98	-38.292	-6.669	.79985	.224	.350	3217.
250.	.01433	1391.61	135.09	-36.766	-4.917	.80693	.221	.345	3177.
255.	.01444	1363.65	130.18	-35.252	-3.169	.81385	.217	.339	3144.
260.	.01455	1339.29	125.96	-33.762	-1.441	.82056	.213	.333	3119.
265.	.01465	1301.09	124.02	-32.309	.242	.82696	.209	.334	3101.
270.	.01476	1269.33	123.26	-30.852	1.937	.83330	.206	.337	3097.
275.	.01486	1237.42	122.29	-29.400	3.627	.83950	.205	.341	3089.
280.	.01497	1194.07	121.60	-27.931	5.341	.84568	.203	.347	3073.
285.	.01509	1222.81	119.32	-26.426	7.114	.85195	.203	.343	3095.
290.	.01520	1172.94	117.12	-24.941	8.839	.85797	.205	.350	3046.
295.	.01532	1154.99	114.14	-23.447	10.588	.86395	.207	.352	3013.
300.	.01544	1149.99	111.01	-21.925	12.380	.86997	.208	.350	2993.
310.	.01567	1112.95	105.46	-18.929	15.898	.88150	.207	.348	2943.
320.	.01590	1043.97	98.90	-16.017	19.317	.89236	.204	.345	2856.
330.	.01614	992.16	93.35	-13.142	22.722	.90284	.201	.340	2793.
340.	.01639	962.47	89.74	-10.277	26.152	.91308	.197	.339	2768.
350.	.01665	931.74	86.07	-7.465	29.525	.92286	.194	.337	2737.
360.	.01691	910.41	82.43	-4.655	32.925	.93244	.192	.334	2710.
370.	.01717	874.92	78.73	-1.919	36.228	.94148	.191	.334	2664.
380.	.01743	839.95	74.90	.785	39.509	.95024	.189	.332	2613.
390.	.01768	797.38	71.12	3.433	42.724	.95859	.188	.331	2551.
400.	.01796	780.44	67.46	6.106	46.021	.96694	.187	.327	2512.
410.	.01826	777.53	65.05	8.776	49.342	.97514	.186	.324	2503.
420.	.01855	768.21	62.70	11.416	52.627	.98306	.186	.323	2486.
430.	.01884	754.64	60.25	14.030	55.884	.99072	.185	.321	2461.
440.	.01910	719.18	57.73	16.554	58.998	.99788	.185	.323	2411.
450.	.01938	688.72	55.29	19.074	62.132	1.00492	.185	.324	2364.
460.	.01970	686.48	53.01	21.667	65.439	1.01219	.184	.320	2349.
470.	.02001	680.05	51.21	24.215	68.682	1.01917	.184	.318	2336.
480.	.02031	666.01	49.46	26.707	71.835	1.02580	.183	.318	2314.
490.	.02062	657.65	47.77	29.204	75.023	1.03238	.183	.317	2298.
500.	.02094	654.30	46.13	31.697	78.230	1.03886	.182	.314	2287.
510.	.02125	645.26	44.60	34.143	81.368	1.04507	.181	.313	2271.
520.	.02156	634.65	43.08	36.562	84.476	1.05110	.181	.312	2252.
530.	.02187	624.83	41.63	38.950	87.550	1.05696	.180	.310	2234.
540.	.02218	616.22	40.24	41.319	90.614	1.06269	.179	.308	2217.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

13000. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 115.227	.01181	2738.00	326.22	-80.896	-52.472	.51818	.274	.390	4246.
120.	.01189	2681.66	314.70	-79.231	-50.617	.53395	.271	.387	4211.
125.	.01197	2622.98	303.42	-77.500	-48.686	.54972	.268	.385	4174.
130.	.01205	2564.70	292.83	-75.781	-46.768	.56476	.266	.382	4137.
135.	.01214	2506.88	282.83	-74.074	-44.861	.57916	.263	.380	4100.
140.	.01222	2449.58	273.35	-72.379	-42.966	.59294	.260	.378	4063.
145.	.01230	2392.89	264.33	-70.696	-41.082	.60616	.257	.376	4025.
150.	.01239	2336.89	255.71	-69.024	-39.209	.61886	.254	.374	3988.
155.	.01247	2281.65	247.46	-67.364	-37.346	.63108	.252	.371	3950.
160.	.01255	2227.24	239.55	-65.715	-35.493	.64284	.249	.369	3912.
165.	.01264	2173.75	231.95	-64.076	-33.650	.65418	.247	.368	3873.
170.	.01272	2121.23	224.63	-62.448	-31.816	.66513	.245	.366	3834.
175.	.01281	2069.77	217.57	-60.829	-29.990	.67572	.243	.364	3794.
180.	.01290	2019.40	210.77	-59.218	-28.171	.68597	.241	.363	3753.
185.	.01298	1970.20	204.19	-57.615	-26.358	.69591	.240	.362	3712.
190.	.01307	1922.19	197.84	-56.017	-24.549	.70555	.239	.361	3670.
195.	.01316	1875.43	191.70	-54.424	-22.744	.71493	.238	.361	3627.
200.	.01325	1829.94	185.76	-52.834	-20.940	.72407	.238	.361	3584.
205.	.01334	1785.75	180.02	-51.246	-19.136	.73298	.238	.361	3540.
210.	.01343	1742.85	174.46	-49.658	-17.332	.74168	.238	.361	3496.
215.	.01352	1701.26	169.08	-48.071	-15.527	.75018	.239	.361	3453.
220.	.01361	1660.97	163.88	-46.486	-13.722	.75847	.238	.360	3411.
225.	.01370	1621.95	158.85	-44.908	-11.924	.76655	.236	.358	3374.
230.	.01379	1584.18	153.99	-43.349	-10.143	.77437	.231	.352	3345.
235.	.01390	1562.26	152.11	-41.972	-8.520	.78130	.231	.356	3337.
240.	.01399	1526.67	147.54	-40.420	-6.737	.78880	.230	.354	3300.
245.	.01410	1513.61	142.69	-38.852	-4.922	.79629	.227	.349	3279.
250.	.01419	1474.65	137.88	-37.335	-3.174	.80334	.225	.345	3239.
255.	.01429	1447.56	132.84	-35.826	-1.422	.81028	.221	.338	3206.
260.	.01439	1424.23	127.94	-34.339	.311	.81700	.217	.331	3176.
265.	.01449	1384.32	123.32	-32.904	1.979	.82335	.213	.326	3134.
270.	.01459	1351.73	121.34	-31.481	3.645	.82957	.209	.325	3121.
275.	.01469	1318.94	121.57	-30.069	5.298	.83563	.206	.329	3125.
280.	.01479	1240.91	121.59	-28.659	6.949	.84158	.204	.339	3091.
285.	.01492	1324.94	121.96	-27.147	8.762	.84799	.203	.335	3183.
290.	.01501	1255.13	120.86	-25.709	10.434	.85382	.205	.346	3132.
295.	.01512	1241.48	118.91	-24.231	12.175	.85977	.207	.350	3115.
300.	.01524	1246.04	116.19	-22.710	13.980	.86584	.208	.348	3106.
310.	.01546	1214.86	110.21	-19.738	17.489	.87734	.208	.345	3057.
320.	.01567	1131.75	105.02	-16.869	20.858	.88804	.205	.347	2978.
330.	.01589	1071.35	98.25	-14.022	24.233	.89843	.202	.341	2895.
340.	.01613	1042.19	92.61	-11.181	27.649	.90863	.198	.333	2848.
350.	.01637	1011.82	89.40	-8.413	30.985	.91830	.195	.332	2825.
360.	.01662	993.47	85.98	-5.631	34.370	.92783	.193	.330	2806.
370.	.01685	954.34	82.78	-2.939	37.625	.93675	.191	.331	2766.
380.	.01709	914.52	79.45	-.271	40.862	.94539	.190	.332	2720.
390.	.01731	861.09	76.04	2.331	44.007	.95356	.189	.335	2655.
400.	.01757	845.08	72.08	5.005	47.311	.96194	.189	.329	2614.
410.	.01786	852.04	67.80	7.683	50.665	.97022	.188	.318	2587.
420.	.01813	848.80	65.44	10.301	53.943	.97812	.187	.316	2578.
430.	.01840	838.54	63.31	12.891	57.183	.98573	.187	.315	2563.
440.	.01863	792.74	61.44	15.357	60.203	.99267	.186	.321	2515.
450.	.01887	751.35	59.42	17.831	63.255	.99954	.186	.325	2468.
460.	.01917	751.89	56.49	20.437	66.591	1.00688	.186	.318	2445.
470.	.01946	746.62	54.13	22.975	69.832	1.01385	.185	.314	2425.
480.	.01973	730.43	52.29	25.436	72.942	1.02039	.184	.314	2400.
490.	.02002	721.72	50.70	27.913	76.109	1.02692	.184	.313	2387.
500.	.02032	719.96	48.98	30.399	79.318	1.03340	.183	.311	2378.
510.	.02061	709.75	47.46	32.826	82.429	1.03956	.183	.310	2362.
520.	.02089	696.69	46.05	35.222	85.499	1.04552	.182	.310	2345.
530.	.02116	684.96	44.67	37.593	88.541	1.05131	.181	.309	2328.
540.	.02145	674.58	43.29	39.949	91.576	1.05699	.180	.308	2311.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

14000. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 116.480	.01178	2789.94	326.74	-80.685	-50.153	.51935	.275	.389	4279.
120.	.01183	2749.07	318.26	-79.466	-48.785	.53092	.273	.388	4253.
125.	.01192	2691.27	306.90	-77.745	-46.854	.54668	.270	.385	4217.
130.	.01200	2633.83	296.23	-76.036	-44.936	.56173	.267	.382	4181.
135.	.01208	2576.81	286.16	-74.340	-43.029	.57612	.264	.380	4144.
140.	.01216	2520.27	276.62	-72.656	-41.135	.58990	.261	.378	4108.
145.	.01224	2464.29	267.53	-70.984	-39.252	.60311	.259	.375	4071.
150.	.01232	2408.96	258.86	-69.323	-37.381	.61580	.256	.373	4035.
155.	.01240	2354.34	250.57	-67.674	-35.520	.62800	.253	.371	3997.
160.	.01249	2300.52	242.61	-66.036	-33.669	.63975	.251	.369	3960.
165.	.01257	2247.55	234.97	-64.409	-31.829	.65107	.249	.367	3922.
170.	.01265	2195.52	227.61	-62.793	-29.997	.66201	.246	.365	3883.
175.	.01273	2144.49	220.53	-61.185	-28.174	.67258	.245	.364	3844.
180.	.01282	2094.51	213.69	-59.586	-26.359	.68281	.243	.362	3804.
185.	.01290	2045.64	207.10	-57.994	-24.549	.69273	.242	.361	3763.
190.	.01299	1997.92	200.72	-56.408	-22.744	.70236	.241	.361	3722.
195.	.01307	1951.39	194.56	-54.827	-20.942	.71172	.240	.360	3680.
200.	.01316	1906.09	188.60	-53.248	-19.142	.72084	.240	.360	3637.
205.	.01324	1862.03	182.84	-51.671	-17.342	.72973	.240	.360	3593.
210.	.01333	1819.22	177.26	-50.094	-15.542	.73841	.241	.360	3550.
215.	.01341	1777.68	171.87	-48.518	-13.741	.74689	.241	.360	3508.
220.	.01350	1737.39	166.65	-46.943	-11.940	.75516	.241	.359	3467.
225.	.01359	1698.35	161.60	-45.377	-10.146	.76322	.239	.357	3430.
230.	.01368	1660.52	156.72	-43.828	-8.369	.77103	.234	.352	3402.
235.	.01378	1640.37	153.29	-42.469	-6.753	.77792	.234	.352	3383.
240.	.01387	1605.00	149.71	-40.930	-4.978	.78539	.233	.352	3354.
245.	.01397	1596.01	145.23	-39.365	-3.153	.79291	.231	.348	3338.
250.	.01406	1556.11	140.51	-37.857	-1.409	.79995	.228	.344	3298.
255.	.01416	1529.93	135.60	-36.350	.347	.80690	.225	.339	3267.
260.	.01425	1507.65	130.50	-34.864	2.089	.81365	.221	.332	3237.
265.	.01435	1465.97	125.64	-33.435	3.754	.81999	.217	.326	3192.
270.	.01444	1432.52	121.07	-32.020	5.415	.82619	.213	.320	3156.
275.	.01454	1398.85	117.70	-30.638	7.042	.83215	.209	.316	3127.
280.	.01462	1256.81	117.84	-29.307	8.592	.83773	.206	.329	3046.
285.	.01476	1431.66	120.66	-27.776	10.481	.84440	.203	.320	3232.
290.	.01484	1334.23	120.97	-26.403	12.073	.84994	.205	.335	3177.
295.	.01495	1326.37	122.21	-24.951	13.799	.85584	.207	.345	3197.
300.	.01506	1343.27	120.14	-23.435	15.618	.86195	.208	.344	3205.
310.	.01528	1320.38	115.27	-20.479	19.128	.87345	.208	.343	3176.
320.	.01547	1220.33	109.99	-17.665	22.429	.88393	.206	.346	3085.
330.	.01567	1149.17	104.73	-14.848	25.767	.89422	.203	.346	3014.
340.	.01589	1120.54	97.36	-12.007	29.195	.90446	.200	.334	2948.
350.	.01612	1090.79	92.02	-9.260	32.518	.91409	.196	.327	2901.
360.	.01635	1076.16	88.90	-6.510	35.886	.92357	.194	.325	2890.
370.	.01657	1032.94	86.08	-3.863	39.093	.93235	.192	.327	2854.
380.	.01679	987.44	83.16	-1.241	42.274	.94084	.191	.330	2811.
390.	.01698	920.51	80.53	1.300	45.326	.94878	.190	.337	2749.
400.	.01723	905.78	76.82	3.968	48.633	.95717	.190	.333	2714.
410.	.01750	925.87	72.64	6.685	52.062	.96565	.189	.322	2701.
420.	.01777	930.96	68.51	9.321	55.381	.97364	.188	.312	2673.
430.	.01802	925.68	65.61	11.891	58.615	.98124	.188	.308	2653.
440.	.01822	867.86	64.09	14.287	61.522	.98791	.187	.315	2601.
450.	.01842	812.64	62.46	16.692	64.457	.99452	.187	.323	2549.
460.	.01872	816.54	60.22	19.305	67.823	1.00192	.187	.319	2543.
470.	.01899	812.82	57.82	21.854	71.085	1.00894	.186	.315	2525.
480.	.01924	794.37	55.34	24.299	74.168	1.01544	.186	.312	2489.
490.	.01950	785.46	53.32	26.762	77.322	1.02193	.185	.310	2469.
500.	.01979	785.78	51.54	29.240	80.537	1.02842	.184	.307	2462.
510.	.02005	774.47	50.11	31.647	83.622	1.03453	.184	.307	2448.
520.	.02030	758.74	48.67	34.019	86.652	1.04041	.183	.307	2428.
530.	.02056	745.09	47.32	36.368	89.656	1.04613	.182	.307	2411.
540.	.02081	732.99	46.03	38.704	92.657	1.05174	.181	.306	2396.

* TWO-PHASE BOUNDARY

TABLE VIb. THERMODYNAMIC PROPERTIES OF OXYGEN

15000. PSIA ISOBAR

TEMPERATURE DEG. R	VOLUME FT^3/LB	ISOTHERM DERIVATIVE FT^3-PSIA/LB	ISOCHORE DERIVATIVE PSIA/R	INTERNAL ENERGY BTU/LB	ENTHALPY BTU/LB	ENTROPY BTU/LB-R	C_V BTU/LB-R	C_P BTU/LB-R	VELOCITY OF SOUND FT/S
* 117.723	.01175	2841.49	327.23	-80.472	-47.839	.52051	.276	.389	4311.
120.	.01178	2815.46	321.76	-79.688	-46.955	.52795	.274	.388	4294.
125.	.01186	2758.51	310.31	-77.976	-45.023	.54372	.271	.385	4259.
130.	.01194	2701.87	299.57	-76.277	-43.104	.55877	.268	.382	4223.
135.	.01202	2645.61	289.42	-74.591	-41.198	.57315	.266	.380	4188.
140.	.01210	2589.79	279.81	-72.917	-39.304	.58693	.263	.378	4152.
145.	.01218	2534.49	270.66	-71.255	-37.422	.60014	.260	.375	4116.
150.	.01226	2479.79	261.94	-69.604	-35.552	.61282	.257	.373	4080.
155.	.01234	2425.76	253.59	-67.966	-33.692	.62501	.255	.371	4043.
160.	.01242	2372.48	245.58	-66.338	-31.844	.63675	.252	.369	4006.
165.	.01250	2320.01	237.89	-64.722	-30.005	.64806	.250	.367	3968.
170.	.01258	2268.43	230.50	-63.115	-28.176	.65899	.248	.365	3930.
175.	.01266	2217.80	223.37	-61.518	-26.355	.66954	.246	.363	3892.
180.	.01274	2168.18	216.50	-59.929	-24.542	.67976	.245	.362	3852.
185.	.01282	2119.61	209.88	-58.348	-22.735	.68966	.244	.361	3812.
190.	.01290	2072.15	203.47	-56.772	-20.932	.69928	.243	.360	3771.
195.	.01299	2025.83	197.29	-55.201	-19.134	.70862	.243	.360	3730.
200.	.01307	1980.68	191.30	-53.633	-17.337	.71773	.242	.359	3688.
205.	.01315	1936.74	185.52	-52.066	-15.540	.72660	.243	.359	3645.
210.	.01323	1894.00	179.92	-50.499	-13.743	.73527	.243	.360	3602.
215.	.01332	1852.49	174.50	-48.932	-11.944	.74373	.243	.360	3560.
220.	.01340	1812.19	169.26	-47.367	-10.147	.75199	.243	.359	3520.
225.	.01348	1773.11	164.19	-45.810	-8.356	.76004	.241	.357	3483.
230.	.01357	1735.21	159.28	-44.270	-6.582	.76783	.236	.351	3455.
235.	.01366	1716.82	154.01	-42.920	-4.965	.77472	.236	.349	3425.
240.	.01375	1681.71	150.95	-41.395	-3.198	.78216	.236	.349	3400.
245.	.01385	1677.00	147.19	-39.835	-1.365	.78971	.234	.346	3392.
250.	.01394	1636.13	142.99	-38.335	.375	.79673	.231	.344	3356.
255.	.01403	1610.90	138.17	-36.831	2.136	.80369	.228	.339	3326.
260.	.01412	1589.68	133.22	-35.344	3.886	.81048	.225	.332	3298.
265.	.01421	1546.19	128.32	-33.919	5.550	.81681	.221	.327	3252.
270.	.01430	1511.86	123.19	-32.506	7.214	.82301	.218	.320	3211.
275.	.01439	1477.29	118.74	-31.126	8.842	.82897	.214	.314	3173.
280.	.01445	1222.83	114.91	-29.870	10.265	.83410	.211	.328	2968.
285.	.01461	1543.67	115.64	-28.303	12.283	.84121	.205	.303	3248.
290.	.01468	1409.86	117.43	-27.003	13.781	.84642	.206	.320	3181.
295.	.01479	1409.47	119.70	-25.589	15.480	.85222	.207	.329	3217.
300.	.01490	1441.75	121.57	-24.094	17.390	.85832	.208	.334	3278.
310.	.01511	1429.76	119.59	-21.166	20.804	.86979	.208	.339	3288.
320.	.01528	1310.07	115.38	-18.407	24.031	.88004	.206	.346	3196.
330.	.01546	1225.77	109.89	-15.633	27.316	.89016	.203	.347	3115.
340.	.01568	1197.65	103.95	-12.790	30.758	.90045	.200	.340	3068.
350.	.01589	1168.75	96.69	-10.038	34.094	.91013	.198	.328	3000.
360.	.01612	1158.58	91.11	-7.295	37.474	.91965	.195	.319	2964.
370.	.01632	1110.77	88.55	-4.699	40.624	.92827	.193	.322	2929.
380.	.01651	1058.72	86.26	-2.126	43.744	.93659	.192	.327	2891.
390.	.01668	975.31	83.94	.340	46.681	.94423	.191	.336	2820.
400.	.01692	962.21	80.96	2.993	49.981	.95261	.190	.335	2800.
410.	.01719	999.05	76.98	5.749	53.499	.96132	.190	.323	2806.
420.	.01745	1014.75	73.02	8.416	56.880	.96946	.189	.314	2791.
430.	.01769	1016.10	69.09	11.008	60.156	.97716	.189	.306	2761.
440.	.01786	944.69	66.19	13.344	62.955	.98358	.189	.309	2678.
450.	.01803	872.56	64.67	15.670	65.751	.98987	.188	.318	2613.
460.	.01831	880.39	62.79	18.274	69.135	.99732	.188	.316	2619.
470.	.01857	878.57	60.93	20.815	72.404	1.00435	.187	.314	2613.
480.	.01880	857.75	59.07	23.247	75.462	1.01079	.187	.315	2587.
490.	.01905	848.77	56.74	25.716	78.623	1.01731	.186	.311	2563.
500.	.01932	851.65	54.19	28.202	81.866	1.02386	.185	.305	2546.
510.	.01956	839.27	52.42	30.592	84.928	1.02991	.185	.303	2526.
520.	.01979	820.66	51.02	32.936	87.914	1.03570	.184	.304	2505.
530.	.02002	805.12	49.81	35.262	90.880	1.04135	.183	.304	2490.
540.	.02026	791.33	48.48	37.578	93.848	1.04690	.182	.304	2474.

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16. Abstract

NBS compressibility measurements and thermodynamic properties calculations for oxygen have been extended to higher pressures. The results of a new experimental program are presented in the form of PVT data in the temperature range 58 - 300 K at pressures up to 800 bar. Tables of the derived thermodynamic properties on isobars to 1000 bar are given, including density, internal energy, enthalpy, entropy, specific heats at constant volume and constant pressure, velocity of sound, and the surface derivatives $(\partial P/\partial T)_\rho$ and $(\partial P/\partial \rho)_T$. Auxiliary tables in engineering units are also given. The accuracy of the data is discussed and comparisons are made with previous data.

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